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Well-Managed Mobile Devices

The Right Policies & Procedures Save On Support, Legal Liability

by Ericka Chickowski

MOBILITY IS NO LONGER a novelty in IT. Devices such as handhelds and smartphones have become the norm for workers on the go. Within the next three years, more than 50% of all workers will be equipped with a laptop.

Yet businesses lag in the important category of device management. Fewer than 10% of all enterprises even have a plan in place to manage and secure these devices.

"Few enterprises currently have adequate plans to adapt to this changing environment by deploying sufficient infrastructure and application support," says Jay Gold of J. Gold Associates in a recent report titled "Managing Mobility in the Enterprise." "Even fewer have sufficient plans to manage and secure such diversity of



devices, connections, and locations," he goes on to say.

High ROI Of Well-Managed Devices

Like many analysts, Gold advocates for well-managed devices based on the numbers. His report shows that organizations that deploy effective device management solutions enjoy a 10% to 15% lower TCO than those that do not.

"Managing mobility will become a competitive edge to those companies who do it right and a substantial Achilles' Heel to those who don't," he says.

To do it right, organizations are employing software solutions that track devices, enforce security, and sync data on the organization's terms rather than the user's. This automation is the only way to truly support the diversity of devices available today without putting undue burden on help desk and other support staff.

"Companies failing to deploy adequate mobile Go to Page 10

Buying Equipment For The Data Center

Keeping Pace With Exponential Growth In Power & Cooling Needs

by Tony Bradley

FOR THE PAST 40 YEARS, the computing industry has grown exponentially, following Moore's Law, which suggests that computing power will double roughly every 18 to 24 months. That's great for being able to process larger files and more complex data in less time, but unfortunately for data centers, it also translates to an exponential increase in power consumption

and in the heat generated by the computer systems.

A data center built even in the past couple of years may need a substantial upgrade to its power and cooling capacity if newer, more powerful servers are going to be deployed there. If you are constructing a data center from the ground up, you would be wise to factor as much of this exponential increase as you can into your design so that the data center can accommodate the servers to come for the foreseeable future.

Keep in mind not only the current needs but how those needs might change over time.

Planning Ahead

Server rooms consume energy, plain and simple. First, as servers have become smaller and blade servers have grown in popularity, more processing power is being squeezed into the same or less space. All of those servers require power to run, and they put off intense amounts of heat in the process. To dissipate the hot air and keep the overall temperature of the data center down, you must run air conditioning units, which consume more power.

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Is your IT department up to speed when it comes to mobile devices? What about managing those devices? We provide tips for well-managed mobile devices and run down some of the best mobile applications and specialized mobile devices.

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■ Advantage International released Add2Outlook For Contacts. ■ AirMagnet's Laptop Analyzer 6.0 helps system administrators secure their wireless networks. **Cloakware** introduced Server Password Manager 2.0 for password automation and better security. ■ Ecutel Systems' Endpoint Automated Security Initiative manager enables administrators to develop and enforce endpoint security policies. ■ KEMP Technologies introduced LoadMaster 1500, a server load balancer that includes SSL acceleration. ■ McDATA released its new security self-assessment tool. SANscope. ■ Pervedia released Permission Analyzer 1.2.8. a Windows administration tool. ■ Revinetix announced it will soon support incremental storage expansion on its disk-based backup and recovery appliances. ■ **Tripp Lite** released the Automatic Voltage Regulation UPS Systems. ■ VIA Technologies announced its StrongBox security application is available as a free download.

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Upcoming IT Events

- DECEMBER -

ITC East December 13-14 Harrisburg, Pa. www.govresources.com

> Interop Fall December 12-16 New York, N.Y.

www.interop.com Visit Processor at Booth #236

- JANUARY -

Storage Visions 2006 Conference January 6-7 Las Vegas, Nev. www.storagevisions.com

. WCA International Symposium & Business Expo

January 18-20 San Jose, Calif. www.wcai.com

VS Live!

January 29-February 2 San Francisco, Calif. www.ftponline.com/conferences /vslive/2006/sf

- FEBRUARY -

Call Center Demo & Conference February 6-8 Austin, Texas

www.ccdemo.com/ccd

RSA Conference February 13-17 San Jose, Calif. http://2006.rsaconference.com/us

. RFID World February 27-March 1

Dallas, Texas www.shorecliffcommunications .com/rfid06

Search Engine Strategies Conference & Expo February 27-March 2

New York, N.Y. www.jupiterevents.com/sew /winter06/index.html

- MARCH -

Gartner Business Intelligence Summit March 6-8 Chicago, III. www.gartner.com/2_events /conferences/bi4.jsp

> VoiceCon March 6-9 Orlando, Fla. www.voicecon.com

March 7-9 Washington, D.C. www.fose.com

FOSE

PC Forum

March 12-14 Carlsbad, Calif. www.edventure.com /pcforum/

. Comptel Spring 2006 Convention & Expo

> March 19-22 San Diego, Calif. www.comptel.org

Help Desk Institute Conference

March 19-22 Nashville, Tenn. www.thinkhdi.com/hdi2006

TelecomNEXT March 20-22 Las Vegas, Nev. www.telecom-next.com

. Florida Educational **Technology Conference** March 22-24 Orlando, Fla. www.fetc.org

. Gartner Business Process

Management Summit March 27-29 Nashville, Tenn. www.gartner.com/2_events /conferences/bpm2.jsp

MarketPlace - NEWS





■ No Vista Beta 2 This Year

MICROSOFT ANNOUNCED Beta 2 of Vista would not be available until early 2006. Despite the delayed release of Beta 2, a Microsoft vice president says Vista general availability is still on track for the second half of next year. Unlike with past operating system releases, Microsoft is also using a Community Technology Preview program that allows regular updates of Vista code and provides another way for the company to get feedback about the OS, making the beta schedule less critical. Vista's server counterpart, codenamed Longhorn Server, is still slated for release in 2007.

Gartner Identifies Emerging Trends

GARTNER ANALYSTS identified what the research firm believes are the key trends for 2006. In a report, Gartner analyst Diane Morello says the demand for IT specialists will shrink as much as 40% within the next five years as companies look for "IT versatilists," or employees who specialize in IT but also have a keen understanding of business. Gartner also believes that spending on regulatory compliance will grow at twice the rate of IT spending and that an increasing number of enterprises will require employees to purchase their own notebooks through the use of a stipend and a list of options.

Spam Filters Are Improving

THE FEDERAL TRADE COMMISSION reports that Internet service providers are becoming more effective at blocking unwanted emails from entering their customers' inboxes. The FTC used two Web-based email providers in its test, and it found they blocked up to 96% of the spam. The study also found that spammers continue to use automated programs that search the Internet for the @ symbol that signifies an email address. To avoid being targeted, people can write their addresses in an alternate syntax that doesn't use the symbol if they must post it online, the FTC says.

Enterprises Moving Toward Windows Servers

SALES OF WINDOWS server systems accounted for 36.9% of all server sales in the third quarter, marking the first time Windows was the leading OS in new servers, according to IDC. Unix accounted for 31.7% and Linux accounted for 11.5%. Server revenue grew more than expected during the quarter; sales of servers costing less than \$25,000 were responsible for much of the growth. IBM and HP ranked Nos. 1 and 2 in terms of revenue, and Dell was in solid third place, taking a clear lead away from Sun.

More Than Half Of Corporate Email Not Work-Related

More than 30% of all corporate email is unsolicited spam and about 25% of corporate email is personal, meaning more than half of all email received via company email accounts is not work-related, according to studies conducted by Mirapoint and The Radicati Group. The studies also showed that 97% of respondents have personal email accounts; 25% regularly forward company email to personal accounts; and 62% sometimes use personal accounts to send work-related email. Study conductors say this trend is of concern because it can potentially expose employers to a number of security and legal risks.

Attackers Shifting To New Targets

RESEARCH GROUP SANS Institute released a study that reports online attackers have switched their targets to media players and software programs such as antivirus software. Attackers are also targeting network devices, including routers and switches, that direct Internet traffic. The study says operating systems are being attacked less because of the efforts of OS designers and ISPs to beef up security. The study also listed the most-attacked vulnerabilities, including Microsoft's Internet Explorer browser, Outlook Express, and Office, as well as Apple's Mac operating system.

India To Build First Big Chip Plant

A GROUP OF INVESTORS called SemIndia, the Indian government, and AMD have announced plans to build a semiconductor plant in India. The country expects the plant to produce chips to meet its rapidly growing domestic needs as well as creating chips for export. India currently has several chip design facilities but no fabrication plants.

Gartner Clarifies Vista Advice

Organizations still running Windows 2000 should consider upgrading to Windows Vista as soon as it ships, according to Gartner. Previously, the research firm said "most firms could safely hold back until 2008." Any enterprise wanting to deploy Vista in 2008 needs to begin preparation soon, as it takes most companies about 18 months from the time a new OS ships to prepare the OS for deployment on company machines. "Organizations that ignore Vista until 2008 will not be ready to deploy it until 2010," says Gartner analyst Michael Silver.

Study Reveals Top Online Tasks

EMAIL STILL REIGNS as the No. 1 online activity among Internet users, a study conducted by the Pew Internet and American Life Project reports. The No. 2 spot goes to search engine use, which beat out news this year. The study looked at the online activities of 94 million U.S. adults who accessed the Web on a certain day and found 77% used email, 63% used a search engine, and 46% accessed news sites. The study also found those with high-speed broadband that was always on used search engines more, as did those who were wealthier and better educated.

New CTO At Novell

NOVELL HAS CHOSEN Jeffrey Jaffe to be its new CTO and executive vice president, replacing Alan Nugent. Jaffe's experience includes holding executive positions, such as corporate vice president of technology, at IBM and Lucent Technologies. Jaffe's main responsibility at Novell will be to head up the technology and product business units, in addition to various other technical tasks, including supporting the Open Enterprise Server product, which combines Novell's SuSE Linux Enterprise Server with the older NetWare operating system.

Sales Of Next-Generation **Network Equipment Up**

INTERNATIONAL MARKET research firm Dittberner Associates reports that shipments of nextgeneration network equipment such as media gateway, softswitch, and integrated VoIP ports rose sharply in the third quarter, up 70% to 27.3 million. Shipments for VoIP ports alone rose 67% worldwide. Revenues increased 49% worldwide for Q3, but pricing pressures kept the revenues from increasing as much as shipments. Dittberner reports China's Huawei Technologies shipped the most VoIP ports in Q3 at 12.36 million, followed by Siemens and Nortel.

Firefox 1.5 Released

THE MOZILLA FOUNDATION released the new 1.5 version of its popular Firefox browser on schedule, following the release of two browser beta versions and three test release candidates in the past few months. Firefox 1.5 boasts enhanced security features and improved popup blocking, as well as new features such as error message pages that are more descriptive, an automatic software update mechanism, and the ability to drag and drop browser tabs to put them in a different order.

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	Nov. 21 \$	Nov. 30 \$	% change from previous week
Avaya	AV	\$16.39	\$11.85	\$11.92	▲ 0.59%
BEA Systems	BEAS	\$8.35	\$9.34	\$8.77	▼ 6.1%
Computer Associates	CA	\$30.85	\$28.64	\$28.51	▼ 0.45%
Cisco Systems	CSCO	\$19.15	\$17.06	\$17.54	▲ 2.81%
Dell	DELL	\$41.36	\$30.04	\$30.15	▲ 0.37%
Electronic Data Systems	EDS	\$22.50	\$24.08	\$23.05	▼ 4.28%
Google	GOOG	\$179.96	\$409.36	\$404.91	▼ 1.09%
HP	HPQ	\$20.52	\$29.28	\$29.67	▲ 1.33%
IBM	IBM	\$95.88	\$87.29	\$88.90	▲ 1.84%
Intel	INTC	\$23.10	\$25.25	\$26.68	▲ 5.66%
McAfee	MFE	\$28.64	\$29.31	\$27.81	▼ 5.12%
Microsoft	MSFT	\$27.25	\$28.16	\$27.68	▼ 1.7%
Oracle	ORCL	\$13.09	\$12.44	\$12.60	▲ 1.29%
Red Hat Software	RHAT	\$15.00	\$23.54	\$23.57	▲ 0.13%
Sun Microsystems	SUNW	\$5.46	\$3.79	\$3.77	▼ 0.53%
Symantec	SYMC	N/A	\$17.96	\$17.61	▼ 1.95%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

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BUYERS' GUIDE

MARKET WATCH

Blade Servers Pack In The Horsepower

Cost-Effective Alternatives To Implement Server Consolidation Plans

by Paul Ferrill . . .

THE BASIC ARCHITECTURAL concept behind blade servers has been around for quite some time. Put all the CPU, memory, and I/O circuitry on a single board and

plug it into a passive backplane. What's new is the idea that you could plug a bunch of these boards into the same backplane and share access to things such as a high-speed network connection.

Server consolidation is a hot topic for many IT managers today. Reducing the total number of servers along

with space, power, and cooling required can help lower overall operating costs. A typical blade server rack from the leading vendors will hold anywhere from four to 16 blades, depending on the CPU type and number of processors.

When compared to single 1U servers in a 42U rack, you can get more than twice as many servers using blade technology. Another consideration is cabling requirements. When you couple a KVM (keyboard video mouse) switch with a blade server chassis, you can reduce the number of cables required by up to 70% in some cases.

High Performance Computing

In the world of high performance computing, it's all about numbers. The more processors you have, the more computations you can perform. Blade servers offer the perfect solution to packing in the processors. The highspeed interconnect capabilities also serve the HPC problem well.

Buying Tips

Here are some tips for when your company is considering purchasing a blade server.

- Make a list of your server-based applications
- Determine which applications need to run on a single CPU
- · Only buy the blades you need and then add more later when you need them
- Evaluate your I/O needs both short- and long-term and buy with the future in mind

SpaceX is a small launch vehicle company that recently made a decision to build its own HPC system to meet the growing demand for heavy computational analysis. Most of the problems it needed to solve involved aerody-



SNAPSHOT

Pricing for the PowerEdge 1855 chassis starts at \$2,999, and servers start at

Cost-competitive blade solution, but choice in CPUs is somewhat limited; a broad base of I/O offerings provides multiple options for connecting the Dell PowerEdge 1855 to storage and networking infrastructure

www.dell.com

namics, structures, and trajectory analysis, and all required a lot of number crunching.

"When we set out to evaluate systems from various vendors, our primary figure of merit was most performance for the least price," says Michael Colonno, an aerodynamic and structural engineer at SpaceX. "Our operating system of choice is Linux because of the cluster performance and track record at other locations like Stanford and NASA. We wound up choosing Dell mainly on price but also on their commitment to supporting their current architecture for some time to come," says Colonno.

Server Virtualization

Another hot button in the world of server consolidation is virtualization. Microsoft's Virtual Server product along with VMware's GSX and ESX products provide the ability to run multiple "virtual" servers on the same system. With the latest dual core CPUs, this becomes even more practical and a viable solution to the problem of isolating applications to a single operating system instance.

All the hardware vendors support Microsoft or VMware or both on their systems. IBM has announced a number of partnering deals and product offerings, including one with VMware and Citrix to deliver what it calls IBM's Virtualized Hosted Client Infrastructure. This offering is based on VMware virtual infrastructure software and leverages Citrix client access technologies to host multiple users of fully functional desktop environments on IBM BladeCenter.

Dell

The Dell PowerEdge 1855 is the company's second-generation blade server offering. As such, it leverages lessons learned in the previous products and delivers a number of new features that customers asked for. Dell designed the system with an eye toward supporting multiple genera-

tions of blades while offering support for products from key partners such as Brocade, McDATA, QLogic, and Topspin.

Using a 7U chassis, the PowerEdge will hold up to

10 individual blades. Current blade modules include either singleor dual-core Xeon processors. Redundant power is available, and each individual power supply is hot-swappable along with redundant, hot plug cooling fans.

Dell has partnered with a number of com-

panies to provide best-of-breed I/O capabilities. The Brocade Silkworm 3014 Fibre Channel Switch uses one or two I/O module bays and delivers 10 internal fabric ports along with four external 1Gbps and 2Gbps autosensing ports. Another Fibre Channel Switch, the McDATA 4314 is a high-performance FC2 switch delivering 10 internal, independent 2Gbps data paths. You can also add a second board to double throughput and provide redundancy.

The Topspin InfiniBand solution consists of one IB HCA daughtercard for each blade server.

SNAPSHOT

HP

Delivers the widest range of processor options and will be the first to market with an Intel Itanium-based blade (BL60p) early next year; HP's BladeSystem solutions support simultaneous operation of different processor and operating systems

www.hp.com

Each daughtercard is PCI Express compliant and has two 10Gbps ports. Each PowerEdge 1855 chassis can support two Topspin InfiniBand modules for redundancy and connect externally to Topspin server switches such as the 120 and 270.

HP takes a slightly different view of blades and what they deliver. HP's vision for blades is about infrastructure. The HP BladeSystem is a solution that includes storage, virtualization, networking management, and processing. Another key part of HP's strategy is something it calls its "chipnostic" approach. By offering processors from both Intel and AMD, HP lets customers select the systems best suited for their infrastructure based on performance, power, and price.

HP's BladeCenter server offerings include the Intel Xeon-based BL20p, AMD Opteron-based BL25p and BL35p, the AMD Opteron 800-based BL45p, and Intel Itanium2-based BL60p. The

kit to provide network connectivity. HP offers several different models providing 100Mbps Fast Ethernet and 1Gbps Gigabit Ethernet with upgrade paths to 10GbE. Some of the extra features include front-panel Ethernet ports for local switch administration or additional bandwidth to the network backbone, front-panel LED indicators showing link speed and activity for every port, and full end-to-end redundancy including front-mounting hot-plug switches that can be removed and replaced without the need to recable network connections.

IBM partnered with Intel in 2002 to create the BladeCenter Alliance of software and hardware partners, working toward a defacto industry blade standard. According to IDC, IBM's Blade-Center product line captured 45% of worldwide blade revenue share for 2004. That's due in large part to a variety of processor and I/O options coupled with IBM's engineering of highly reliable and maintainable systems.

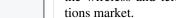
The basic BladeCenter chassis supports up to 14 server bays in a 7U enclosure. Every aspect of the BladeCenter from power supplies to cooling fans to KVM and switch management is redundant and hot swappable. Processor support includes AMD Opteron (LS20), IBM POWER (JS20), and Intel Xeon (HS20 and HS40). Operating system support consists

> of Windows, Linux, and AIX-5L.

On the I/O side, IBM has partnered with companies such as Brocade, McDATA, QLogic, Cisco, and Nortel. One of its recent announcements is the 4Gb SAN solution from Brocade delivering high-performance storage. IBM

also offers its BladeCenter T chassis, specially customized for the wireless and telecommunica-

Smaller Manufacturers



Other options for blade servers do exist. American Portwell Technology sells a product called the Advanced Telecom Computing Architecture that houses up to five dual processor Xeon CPUs. MPAK Technologies offers a number of different blade server configurations that should cover most any application requirement.

Tatung is another company offering several different blade server products. Its ultra-dense model squeezes up to 200 processors into a single 42U cabinet. The BladeRack product line from Verari Systems focuses on the HPC market with Intel Xeon and AMD Opteron processors.

To see Processor Showcase advertisements for products in this category, look in the Solution Index on page 2 and find the Blade Server ads under End Nodes/Server.



SNAPSHOT

HS20: Starts at \$1,669 HS40: Starts at \$4,999 JS20: Starts at \$2,259 LS20: Starts at \$2,259

Offers multiple CPU choices and supports any mix and match of blades in the same chassis; the BladeCenter shows attention to redundancy and ease of maintenance

BL35p offers the most processors

per 42U rack at 192, while the

BL45p offers the most processors per blade (four) and the most

The HP Integrity BL60p is

the first Itanium 2 blade server

designed to support HP-UX and

function side by side with Op-

teron and Xeon blades in the

same chassis. The BL60p will

support up to two processors and

8GB of memory and includes

4GB Ethernet ports plus a dedi-

cated management port. First

shipments of the BL60p are

Each BladeSystem p-Class

enclosure requires an interconnect

expected early next year.

memory at 64GB.

www.ibm.com

HP Integrity BL60p blade server starts at



The *Processor* Showcase section features new products and services available from hot new manufacturers, as well as the old standbys. It's an easy way to compare products and discover new technologies and solutions, so refer to it for all your buying decisions.

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Application Development, Business Productivity, Communications, Security, System Management

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Components, KVM, Mobile Devices, Monitors, Peripherals, Servers, Systems

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_Manufacturer Presentation _

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Small and medium-sized businesses can now enjoy the same class of data protection as large enterprises, thanks to Accordance Systems' new ARAID™. Connected to either local PCs or a central server, the ARAID™ IDE and SATA controllers' RAID 1 capability has now been expanded to protect Registry files, open database files, and application files. ARAID attaches directly to your drive port or externally via your USB or Firewire.

Accordance Systems' ARAID is the first low-cost RAID system of its class, disk mirroring all computer files for disaster recovery and data backup.

The Accordance ARAID controller supports dual hard drives and mirrors data onto both drives. As data gets written to one disk, it is automatically copied to the second disk. If one disk fails, the data is protected on the other disk. To replace a failed hard drive, the user simply pulls out the removable ARAID hard drive tray, pulls out the bad disk, and replaces it with a new one. The ARAID automatically copies the data from the remaining good drive onto the newly inserted hard disk.

The ARAID is commonly used for backup by using three hard drives: one that stays in the ARAID controller and two that are rotated in and out. The removed hard disk is taken offsite to provide reliable and secure storage of valuable data against disaster scenarios. This is an effective replacement to using tape cartridge backup systems. Studies have shown that a third of all tape backups never finish correctly. Disk-based backups using the ARAID are less expensive, less labor intensive, and more reliable than tape-based backups.

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.Manufacturer Presentation **_**

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What's Hot In Mobile Software

Enterprise Tools Are Migrating To The Mobile Market

by David Garrett

PALMS. TREOS. IPAQS. And let's not for-

get the BlackBerry, that little gadget that's sweet as sugar to roving executives.

All told, handhelds of every shape, size, and flavor have entered the enterprise, often in force, and supporting them is now a standard part of the IT expert's day. But do they truly add to office efficiency?

By definition, PDAs and handhelds are good for personal data—the contacts, emails, and calendars that most of us rely on to get things done. But with the right software, they can be used for enterprise apps as well, the kind of high-end, large-scale software that

sales teams, warehouse staff, and more and more mobile users are starting to clamor for.

Here's a look at some of the best mobile apps on the market, including apps for Web browsing, file sharing, network management, CRM, and more.

GoodAccess

If you're like most IT managers, you've spent a good deal of time and money on custom software, such as CRM, ERP, and other database systems, all of it meant to keep your workforce humming. Some of those apps run on remote notebooks with VPNs. But very few run on PDAs, until now.

GoodAccess lets you connect mobile workers to enterprise software behind a firewall. How? It relies largely on a secure AES transport layer, which means that roving users can tap into Oracle, Siebel, and other high-end software from a range of handhelds, including Palms and Pocket PCs.

The software even has a number of sought-after features to please end users and IT staff. Among these is offline use. (Users can save data to their PDAs to read and edit when they're not connected to your network.) The

software can also multitask, letting users respond to email or fiddle with Pocket Word while their CRM app crunches data. And a fairly advanced push feature lets you transfer urgent data, such as sales reports, new leads, or trouble tickets, to your mobile workers from a single, centralized location. GoodAccess also ties in with bar code scanners to read part and inventory numbers, a must for employees who roam a warehouse, scanning boxes.

GoodLink

Trends come and go, but email is (and will most likely remain) the Internet's killer

app. That's where GoodLink Enterprise Edition 4.5, a GoodAccess companion piece, comes in. It lets mobile workers tap in to Exchange, so they can stop using the simple POP accounts most PDAs

F. and more and

also has a host

€ 4x 3:44 🛞

Michael Brinklar RE: mockup RE: Marketing RE: mockup

Canceled: All H John Hartford

slides for the presentation and have uploaded them to our intranet server. You can find them under Marketing > Collaterals in the Slides fol... Inbox: 861 Items, 17 Unread.

GoodLink lets users harness

the power of Exchange from a

PDA. It's more secure than

simple POP email.

of security features and claims to have the lowest TCO of any enterprise wireless messaging system, as well as seven of the Fortune 10 and roughly half of the Fortune 100 among its users.

For Pocket PCs and Palms, GoodLink boasts an array of impressive security perks, such as remote, policy-based control of handheld passwords and remote-controlled data erasure on any device. Its interface apes Microsoft Outlook—a boon for most users familiar with it already—and comes in English, Italian, German, Spanish,

and French versions, for those of us who roam across borders and time zones.

Perhaps most impressive is the optional GoodLink Compliance Manager. It lets admins and IT managers build and enforce tough security policies on users' handhelds. For instance, you can stipulate that an antivirus package of your choice is running and fully updated before GoodLink can be installed, or even while a user is tapping out email.

2CRM

In the early days of handhelds, warehouse and medical apps drove PDA adoption. But times have changed. Today it's roving sales apps that have IT managers scrambling to give their users handhelds.

Enter Air2Web's 2CRM, a suite that gives an enterprise sales force access to data from existing Sales Force Automation, Field Force Automation, and call center systems. It lets you open Siebel, Sales-Force.com, and other software to field users, whether they're using a Palm, RIM (BlackBerry), or Windows CE device. Even better, it's driven by xHTML and forms, so it can deliver and even update

remote applications with ease because the XML API lets you grab data from existing apps with little fuss. And even if your users pay Sprint, Verizon, T-Mobile, or one of a dozen other networks to give them access, don't worry: 2CRM, like other high-end tools in this list, can be used independently of the network vendor.

Blazer

support. It

Pocket PCs come equipped with

Pocket IE, and for most users it's more than enough to surf the Web, make bookmarks, and read the news on the run. But Palm-based browsers have rarely matched IE's feature set and ease of use—that is, until Blazer arrived.

Palm's Blazer is perhaps the leading browser for the Palm market, as any product that supports HTML, xHTML, cHTML, WML, SSL, JavaScript, CSS, and most graphics formats (even PNG) should be. Like Pocket IE, it can tweak the layout of a Web page to minimize scrolling, shifting the graphics and

text around to make them fit your screen. (But like IE's similar feature, this one often leads to odd results.)

Blazer also has all the standard browser features you'd expect, such as Back, Forward, Home, and Refresh buttons, as well as a solid bookmarks function and a History list. But it's the horizontal view feature that makes most users smile: With it, you can rotate a Web page 90 degrees for optimal viewing, a feature that was missing in IE until the most recent versions of Windows Mobile.

Blazer also has a decent search feature and a way to let users navigate a page with only one hand, selecting radio buttons, pull-down menus, and checkboxes without a stylus. An offline browsing feature will please users without Web access, but admins and IT directors will find more value in the SSL encryption and other security features that make Blazer a real option for corporate Web surfing.

Migo

If you're a handheld addict and wish you could transfer your desktop to your Palm or Pocket PC, you'll like Migo. It lets you quickly sync your handheld and desktop machines.

In fact, Migo can be used on more than Palms, Pocket PCs, and BlackBerrys. It runs on nearly any mobile storage device, such as a USB drive, smartcard, and even an MP3 player, iPod, or PlayStation Portable.

Migo relies on a user profile, in which you choose the documents you want to synchronize between your handheld and desktop machines. You can choose recent documents (within the last month), older documents, or even all your documents, provided you have the storage to do so. Migo will also synchronize your email settings, including user accounts and

passwords, for convenience. It can be a boon for help desk agents who hate to configure handheld email.

Infrastructure Command and Control

Thanks to remote management tools, networks no longer need to be run onsite. In theory, a data center director can test router settings from a laptop in Bali, even if his data center and the rest of his luckless colleagues find themselves in Detroit in midwinter. But only a few apps will let you control your network from a handheld, and Ecutel's Infrastructure Command and Control, or IC2, is on the short list.

IC2 lets you configure, tweak, and talk with servers, workstations, storage systems, and appliances from a handheld device. You'll need to install the IC2 server behind your firewall to do so. (As you can guess, it's the server that talks to your infrastructure; the client software on your handheld



One of the best features of Blazer, a Palm-based browser, is the ability to flip a Web site sideways to give your screen more real estate.

merely instructs the server.) But an admin with IC2 on his Palm or PocketPC can run most of the network transactions he needs to, as IC2 supports any Windows or Unix server, router, firewall, printer, UPS, or appliance that can run WMI, SNMP, Telnet, or SSH. It also boasts an audit feature and runs on Pocket PCs, Palms, smartphones, and BlackBerrys.

The end result? Your users won't be the only ones who can work on the go, and you'll be a step closer to that beach in Bali—or wherever your travels take you.

Mobile Apps Roundup

Here's a quick run-down of enterprise-grade mobile apps.

2CRIV

A boon for a big sales force, 2CRM lets you push Sales Force Automation and Field Force Automation tools to remote users.

www.air2web.com

Blazer

Blazer is a browser for the Palm platform. It includes all the features of Pocket IE. www.palm.com

GoodAccess

Just like the name says, GoodAccess lets users tap into high-end software and database systems, such as Oracle, PeopleSoft, and others, that reside behind your firewall. www.good.com

GoodLink

A companion to GoodAccess, GoodLink lets you bring Exchange and strong security to mobile users.

www.good.com

Infrastructure Command and Control (IC2)

A tool for network admins, IC2 lets you tweak your network from afar, from a Palm, Pocket PC, smartphone, or BlackBerry.

www.ecutel.com

Migo

Migo lets user synchronize their local and pocket machines, instead of keeping two copies of data.

www.migosoftware.net

Well-Managed Mobile Devices

Continued from Page 1 management tools face nonproductive users who must often struggle with old or outdated applications, out-of-date files on their devices, and the need to send devices back to the office for updates," Gold says, explaining that this can add up to 25% in extra workload burden to support staff.

One of the biggest problems in mobility management is the very nature of these devices.

The choices are wide in the device management software field, with multiple established vendors filling a niche expected to reach \$400 million in sales by 2009. But many IT managers are finding it hard to justify the expenditure of such software, especially compared

to the ease with which their superiors green-light their own Black-Berry devices and laptops.

But those that face such justification processes have the numbers on their side. According to Gold, it is common to see \$150 to \$250 in savings per user per year when using these tools. Considering the software costs between \$50 and \$100 per user, the ROI is clear.

Security's The Thing

Not only can a well-managed device save on support costs, it can also provide significant security savings and prevent undue risks.

These tools enforce security policies and can automate quarantines for devices infected with viruses and other malware. They also prevent data loss through mobility's biggest security hazard.

"The purpose is to not only support these devices, but at the same time to have a way to shut down a device when it is lost," says Shubha Govil, senior product manager at Sybase's iAnywhere.

One of the biggest problems in mobility management is the very nature of these devices. Because

Processor.com

they aren't nailed to a desk, loss and theft are a serious risk factor. Last year, Credant Technologies did a survey and found that more than 18,000 cell phones were lost in taxicabs in Chicago that year. Extrapolate that across the nation and to other devices, and it is easy to see how this could be a problem.

This would not be an issue if users actually used password protection on their devices, but they don't. Fewer than 5% of users set password protection on unless required to do so by companymandated enforcement.

Management device tools can require password protection be set on when syncing with the network, in addition to a myriad of enforced security options. By utilizing these automatic security options, you may just be preventing a legal disaster, considering the tightened governmental regulations of recent years.

"In many industries you are legally liable for that data," says Richard Stone, vice president of business development for Credant. "Considering it is very easy to have an email or a file with customer information picked up on a Black-Berry or other device, it is important to take this seriously. When it happens [without protection], you'll suddenly realize that the donothing approach is costly."

Mobile Management Tools

There's a wealth of tools available to help you manage and protect your enterprise's mobile devices. Here's a look at a few.

Companies can centrally manage security-policy administration and on-device

Credant Mobile Guardian

policy enforcement with Credant Technologies' Mobile Guardian.

Administrators can track and control mobile device usage on their networks and protect the data stored on them with encryption and tight access control. Pricing starts at \$50 per user license.

www.credant.com

Endforce Enterprise

This product provides security against unsecured devices syncing with the network. Prior to authentication, Endforce Enterprise detects unsecured, non-compliant devices and prevents them from signing on until they have all of the necessary patches, antivirus protection, firewalls, and configurations installed. Pricing starts at \$35 per user license.

www.endforce.com

iAnywhere Afaria

Afaria, created by Sybase's iAnywhere, offers single-point management of all your devices. Administrators can control configuration and track devices from the Afaria console. Similar to many of its competitors, Afaria lets admins remotely disable syncing of unauthorized devices. Pricing varies. www.iAnywhere.com

Wavelink Avalanche

Specializing in wireless mobility, Wavelink's Avalanche provides centralized management of mobile devices while helping to enhance and extend WLAN security through automated updates of infrastructure security parameters. Avalanche provides for seamless syncing through a WLAN connection without the need of docking stations, along with remote control and troubleshooting features. Pricing starts at \$40 per user license.

www.wavelink.com

Buying Equipment For The Data Center

Continued from Page 1

Two years ago, the average watts per square foot in a data center was around 40. That number has doubled in the past two years by some estimates, and projections from Lawrence Berkley Labs and the Uptime Institute suggest that it could climb as high as 500 watts per square foot by 2010. That's a lot of power consumption to

meet the needs of the newer, more powerful servers.

You might also be looking at upgrading the power or cooling capacity of an existing data center, which presents an opportunity for you to examine not only the power and cooling needs of the current server and network equipment but to project into the future and try to make sure your investment in

If you construct your data center power so that the redundant power supplies are fed from separate and distinct circuits, you can make troubleshooting and maintenance significantly easier.

account for when designing a data center to meet the demands of the future.

According to John Martin, marketing manager for Data Aire, "Planning for data centers has always been a tricky business, since physical space tends to last much longer (10 to 15 years) than servers (one to five years). While some entities will need and/or require data centers with 15kW capacity or greater, many data centers will only require a few racks approaching these capacities."

Predicting The Future

How you proceed depends on where you are now. If you are planning a data center from scratch, you have a unique opportunity to gather the evidence you need to present the entire package to management so that they understand the interwoven needs of power and cooling and what the impact could be of not planning for the future.

If you have an existing data center but you are trying to upgrade the servers within it, you need to assess the current power and cooling capacity of the data center and determine whether it will be sufficient to upgrading power or cooling equipment will be enough to handle future growth as well.

Keeping Your Coo

As data centers go to densely packed server racks filled with 1U or blade servers, keeping the equipment within tolerable temperature limits becomes more and more of a concern. There are a few alternative solutions to help keep the data center cool.

One solution is to alternate hot aisles and cold aisles within the data center. The returns can pass over the hot aisles and the CRAC (computer room air conditioning) returns ducted into the plenum. For a hot aisle/cold aisle solution, Martin suggests that you "eliminate any opening between the racks and use blanking panels in the racks when they are not filled with equipment. Block off areas below the racks to avoid air bypassing under the rack. Also, at the end of each rack employ some type of panel to isolate the aisle. Some data center managers may elect to even use ceilings to seal the aisles."

Controlling the flow of hot air and cold air is vitally important to the efficient cooling of the data center. You don't want hot air mixing with the cold air before it gets to the equipment, and the CRAC units operate more efficiently the hotter the air is that returns to them.

Rack-Based Cooling

For extremely dense or hot racks, the general cooling circulating throughout the data center may not be sufficient. For racks such as these you may want to look at rackmounted cooling units such as the Liebert XDV – Vertical Top Cooler (www.liebert.com) or a portable cooling unit such as the Classic Plus series from MovinCool (www.movincool.com).

Another solution for cooling very hot racks is to use a water-cooled rack. Water is significantly more efficient than air when it comes to regulating temperature. Knuerr (www.knuerr.com) offers the Cooltherm water-cooled server rack in a few styles designed to handle different heat loads. APC (www.apcc.com) also offers a water-cooled server rack, the APC High-Density

Cooling Enclosure, capable of cooling up to 18kW per rack.

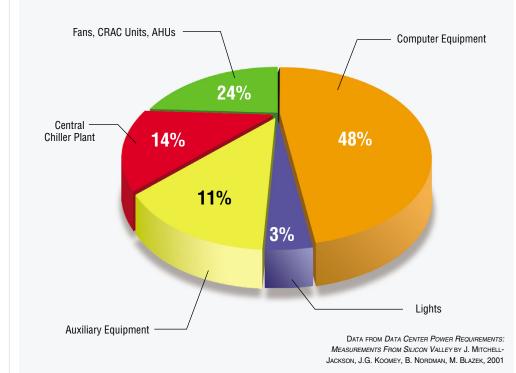
More Power

The other serious factor to keep in mind as you build or upgrade your data center is its power capacity. Most servers and networking equipment have redundant power supplies. If you construct your data center power so that the redundant power supplies are fed from separate and distinct circuits, you can make troubleshooting and maintenance significantly easier. You can shut down a circuit if need be and still have sufficient power to handle the load.

When projecting power needs for your data center, though, keep in mind not only the current needs but how those needs might change over time as equipment gets smaller and you pack more servers into the same space. Also, don't forget to include your backup generator or uninterruptible power supply requirements in your power needs determinations.

Computer Room Power

Here is a breakdown of the power used in the data center. Computer equipment uses the highest percentage, while lights use the least power.



Mobile Equipment That's Built To Last

Specialized Mobile Equipment Is Built For The Road, Even If It Means Getting Run Over

by Elizabeth Millard

CHAD HOWARD BEGAN to dread the calls. As president of Michigan-based Direct Distribution, a purveyor of Red Bull Energy Drink, he'd given his sales team



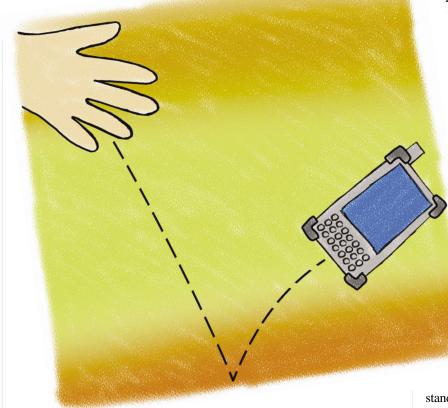
Intermec's CK31 is a rugged version of the company's popular CK30 handheld.

iPAQ Pocket PCs, put out by HP. When the reps used them, distribution efficiency soared. But the costs did, too, because the reps kept breaking the devices.

"They were in the field, at warehouses or supermarkets, and the devices turned out to be more fragile than we realized," says Howard. "They'd miss their pocket in putting it away, and suddenly we had yet another iPAQ to buy."

The solution, Howard discovered, was to get rugged. HP offers a tough-as-nails case for the iPAQ, and when the reps started using them, no more breakage. "It's kind of surprising what a difference it's made," Howard notes. "Now those iPAQs can withstand pretty much anything."

Direct Distribution isn't alone in wanting durability in addition to speed and reliability for its technology. As the workforce goes mobile, ruggedized technology is vital to keep repair and replace costs low and devices running.



Rugged Tablet PCs

Tablet PCs in particular have been a major focus for companies that make rugged gear because the computers are used by so many employees outside or on the road. You can get both slatetype PCs and convertible tablets in ruggedized form from a number of vendors, including Xplore Technologies, Walk-About, Panasonic, Itronix, Intermec, and others. These companies basically work to outdo each other, making for some seriously tough gear, benefiting IT departments.

One of the newest contenders on the market is the iX104C2 put out by Xplore (www.xplore

tech.com). The company creates equipment designed to meet Military Environmental Stan-dards, and the iX104 family of Tablet PCs can withstand drops to concrete from 4 feet, extreme temperatures, and exposure to rain and dirt. The iX104C2 comes with an Intel 733 processor and AllVue screen technology, and it has been praised in reviews for its readability and durability.

Another strong product is the HP tr3000 Rugged Tablet PC (www.hp .com), which is in the same line as the company's iPAQ case and rugged notebook, the nr3600. The devices are specifically designed for punishing workplaces and are compliant with, and in some cases exceed, military

standards. HP touts its rugged line as being especially good in a range of weather situations, from 140 degrees Fahrenheit to -4 degrees.

The Panasonic Toughbook (www.panasonic.com) is one of Go to Page 12

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High-quality output, rugged compact design with a low cost of ownership describes the Pentax PocketJet printer. This printer produces crisp text and graphics with an output of 3ppm while weighing less than a pound. Designed to meet the growing needs of mobile workers, this printer can provide printing in any environment without the ongoing cost and hassles of ink.



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Mobile Equipment That's Built To Last

Continued from Page 11 the best-known in the line of ruggedized portables. Tricked out with a magnesium case, the notebook is likely to scare airport security, but it's really the way Panasonic has made it resistant to dust, vibration, and spills that

that are designed for rough situations. The newest products are the CK31, a rugged version of the company's popular CK30 handheld that incorporates Wi-Fi radio for throughput, and the CN2 mobile computer. For those in the retail industry, the

handheld computing portfolio

CN30 is geared toward giving PDA ability to those doing inventory management, scanning, and retail data input.

For those in a more Pocket PC frame of mind, Tripod Data Systems (www.tdsway .com) specializes in rugged ware, with particular focus on industries such as law enforcement, construction, land surveying, and utilities.

The company's Recon is a popular choice, and not just because of its screaming yellow case option. The handheld computer is lightweight-somewhat unusual in the ruggedized world-and meets military specifications for drops, vibration, and temperature extremes. Especially nice is that its battery last for 15 hours, according to the company, and can expand to a user's needs, since it has two CompactFlash slots for memory or peripheral devices.

Choices, Choices

Like other kinds of technology, determining a company's needs depends on its specific situation. Not all mobile equipment needs to be encased in steel and hard rubber, especially if laptops are only being taken from the office desk to the couch at an employee's home.

To gauge need, an IT department should first assess user activity and need, says Roger Kay, an analyst with Endpoint Technology Associates. Looking at records of what's been repaired in the past year and the cause of damage is a start, he suggests.

"Ultimately, what a company should buy depends on what's been bought in the past and how it's been treated," he says. "Has there been a lot of breakage? Are the mobile employees visiting construction sites or other places that are dangerous to the health of computers? Then going with rugged gear would make sense."

Although it's tempting to just buy all ruggedized equipment and

kiss those repair and replacement costs goodbye, that doesn't always work budget-wise. Unless a company strikes a good deal, rugged equipment almost always costs more than its more-fragile counterparts. But for companies that have four or five reps in the field, it might be worth the extra cost.

"As every IT manager knows, people are clumsy," says Kay. "Integrating some ruggedized equipment into the technology mix could lessen the pain of repair costs."

Rough & Ready

If your enterprise is in need of rugged equipment, there's a range of devices available to fit your specific needs. Here are a few of the newest.

Product	Price	Description	URL
HP Rugged Tablet PC tr3000	\$3,600	Stands up to wide weather ranges; lighter weight than other ruggedized Tablet PCs.	www.hp.com
Intermec CK31	N/A	Includes a Wi-Fi radio, Windows CE .NET operating system, and a clear screen resolution in extreme weather conditions.	www.intermec.com
Panasonic Toughbook 29	\$3,300	Features a magnesium case and is resistant to dust, vibration, and spills. Includes sealed ports and slots.	www.panasonic.com
Tripod Data Systems Recon	\$1,600	Lightweight and withstands drops, vibration, and extreme temperatures. Has an estimated battery life of 15 hours.	www.tdsway.com
Xplore iX104C2 Tablet PC	\$3,300	Withstands drops to concrete from 4 feet, extreme temperatures, and exposure to rain and dirt.	www.xploretech.com

The HP tr3000 Rugged Tablet PC is specifically designed for punishing workplaces.

makes it so tough. The company has sealed the ports and slots and mounted the internal hard drive in shock-absorbing polymer compounds.

Device-Ready

In addition to Tablet PCs, devices are also ripe for the rugged treatment, with strong cases that could be a boon for mobile workers.

Intermec (www.intermec.com) is very active in the space and has a number of products in its

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_Manufacturer Presentation . advertisement

A Clear View to Productivity

DoubleSight provides an economic, easyto-use technique for displaying as much data as a single 30 inch LCD monitor. Users have an instantly clear view of their programs instead of time-consuming switching between programs or document windows with overly crowded desktop space and limited viewing. By performing fast reactions to multiple information sources, DoubleSight users can experience significant productivity increases ranging from approximately 20 to 50 percent by easily managing their multiple programs simultaneously. Unlike large-screen monitors that often sacrifice legibility to offer more desktop space under a high resolution, the DoubleSight dual LCD monitor can effectively provide large desktop space in a legible format.

Stylish, Sturdy Design

Doublesight Displays introduces several new key features with the DS-1700 and DS-1900 Models:

- Height adjustable stand
- Tilting/sliding panes brackets
- Easy to assemble solution (no tools required; assembles within minutes)

These new added features combine a stylish appearance with a unique, light yet sturdy design that requires a minimum of desk space. Doublesight's ergonomic efficiency improves the user's natural perception and ability to multitask by employing a primary "focal point" screen as well as a second screen for supporting peripheral vision.



Why Doublesight Displays?

PCs are cheaper and faster, networking/storage is more accessible at affordable rates, data communication is moving faster and faster the true bottleneck is the monitor.

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_Manufacturer Presentation _

NetFRAME 1420 Rack-Mountable Server

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- SATA II RAID Edition Hard Drives (Optional SATA II Controller Available)
- LANDesk Server Manager Software with Available IPMI 2.0 Mgmt. Module

The NetFRAME 1420 server offers the latest server technology at an affordable price. The NetFRAME 1420 features hotswap SATA II hard drives and DDR2 memory. It provides SMBs and government agencies a cost-effective solution in a 1U rack-mountable form factor. The system also features support for dual-core processor technology, which incorporates two processing units into a single processor chip. The NetFRAME 1420, powered by Supermicro, is designed to increase performance in the single-processor configuration, especially when running multiple applications.

This new server also features system improvements such as a dual Gigabit network interface, PCI Express technology, and LANDesk's Server Management Software. The dual Gigabit network interface enables high network bandwidth, while PCI Express technology increases performance with over 3.5 times more bandwidth than previous PCI slots. The NetFRAME 1420's LANDesk Server Management Software offers an easy-to-use interface to manage all of the clients within an IT environment from a single administrative console.



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PHYSICAL

HVAC

■ Rittal released DCP – Panel Cooling, which is a coolant-flushed cooling system for operating housings (panel PCs). The device dissipates heat losses of 250 to 300W. The unit, which has six fans, mounts in the housing's rear panel. Rittal also offers the DCP – Panel Cooling, operating housing, and the recooler as a complete unit.

Power Protection

■ Tripp Lite released the AVR (Automatic Voltage Regulation) UPS Systems. The AVR550U boasts eight outlets, while the AVR750U offers 12. Both devices protect against brownouts, blackouts, surges, and line noise and have phone/DSL protection, USB port, and PowerAlert software. The software saves open files and powers off the system during power outages. The AVR750 U offers 750VA of backup battery power. The devices have \$100,000 Ultimate Lifetime Insurance that covers direct lightning strikes and surge damage. Both devices also have two-year warranties.

COMMUNICATIONS

Content Networking

■ KEMP Technologies introduced LoadMaster 1500, a server load balancer that includes SSL acceleration. This load balancer is designed for companies that rely on online business transactions. KEMP Technologies designed the LoadMaster 1500 to serve a variety of business sizes, ranging from very small to medium-sized companies. It works with applications with a two- to six-server deployment behind a T1 or broadband connection. The Load-Master 1500 has three 10/100 Ethernet ports and supports as many as 20,000 concurrent Layer 7 sessions or 500,000 concurrent Layer 4 sessions. Up to 60 secure TPS are provided through SSL offload. The LM-1500 costs \$2,490 and includes one year of product support.

Security

■ Fortinet introduced two FortiGate-1000A multigigabit security appliances designed for large enterprises. Some of the system's features include a new FortiASIC content processor 5; clustering, device failure detection, and notification; and dual hot-swappable power supply and fan capabilities. The security protections include firewall, VPN, antivirus, Web filtering, intrusion prevention, antispam, and traffic shaping. The FortiGate-1000A systems are ideal for securing the Internet and intranet gateways, while the FortiGate-1000AFA2 systems work best with segmented networks that handle multimedia streaming applications such as video-and-voice over IP.

.

■ NetClarity's Auditor family of vulnerability and intrusion management appliances has some additional features. Auditors can now scan VoIP servers, switches, routers, and handsets for common vulnerabilities and exposures. Also new is central control of remote appliances through NetClarity's Command Center. Other enhancements include new reporting and backup capabilities, several with regulatory compliance in mind.

■ The NetApp NetCache C1300 from Network Appliance is a new, economical security appliance for highly distributed environments and the enterprise. Remote

and branch offices will enjoy faster access to apps and Web content with the C1300, Network Appliance says, while simultaneously benefiting from the company's NetApp Uncompromised Security initiative.

■ Sensory Networks announced the first two products in its C-Series security acceleration cards. These are next-generation cards built on Sensory Networks' NodalCore processor technology. The first card, the C-2000 Ultra, has a 2Gbps throughput per PCI card. The second offering, the C-2000 MX has a throughput of 500Mbps. It is a low-cost acceleration card designed for SME and midrange appliances. This family supports databases of up to 10 million signatures, which lets these cards accelerate multiple applications simultaneously. The C-2000 family also features Sensory Networks' CorePAKT MMA (Massive Memory Architecture) technology, which lets full commercial security products such as antivirus, antispam, and content filtering databases exist at the same time. The C-2000 product line is available starting at \$499 for the C-2000 MX card.

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Continuous Data Protection With EMC RecoverPoint

Flexible Point In Time Data Recovery

by Joe Lazzaro

DATA IS THE LIFEBLOOD of business, and every year there is more of it to manage, store, and possibly lose. A company will rise or fall on its ability to recover from the catastrophic loss of applications and data or damage to its databases. With the introduction of EMC's RecoverPoint software, data can be recovered to any previous point in time quickly; add EMC's Backup Advisor and you have a powerful data protection package.

RecoverPoint is an applicationaware, enterprise-level data protection program that captures data writes as they happen on a production system and duplicates the writes to a designated separate storage location. By writing in parallel, RecoverPoint creates a recovery point whenever a change is made and protects the enterprise from data loss caused by logical corruption or server hardware failures. RecoverPoint provides coordinated recovery of groups of related applications and the ability to restart applications from a specific point in time, affording a simpler and more rapid return to normal operations.

RecoverPoint supports a heterogeneous environment including storage arrays, applications, and operating systems, thereby protecting existing storage investments. However, RecoverPoint is not a standalone product; it requires the EMC Replication Manager Agent to be installed on each host for which you want to provide the RecoverPoint CDP (Continuous Data Protection) defense.

At the initial release, Recover-Point agents support Solaris 8 and 9 with application integration for Oracle 9i, 10g, UFS, and VxFS and Windows 2003 with application integration for MS SQL Server

2000 and NTFS. Along with the agents, the central RecoverPoint Engine resides on a customer supplied, dedicated Red Hat Linux box and manages the metadata from the RecoverPoint Protection Drivers, facilitating virtualized data restores as needed.

EMC also announced the availability of the EMC Backup Advisor. This product displays information gathered from a heterogeneous backup infrastructure providing a centralized monitoring and management console. Backup Advisor monitors backup processes and can rectify many problems by executing a variety of tasks including advanced fault diagnosis and identification of potential security risks.

One competitor is Tivoli Storage Manager from IBM, which recently added CDP technology to

SNAPSHOT

EMC RecoverPoint and Backup Advisor

EMC RecoverPoint: starts around \$70,000 Backup Advisor: \$130 per host

Backup Advisor simplifies the management of the information protection environment; together with RecoverPoint enterprise-level CDP software protection, these products achieve optimal recovery point and recovery time objectives

www.Processor.com/EMC5

its established software. Also, RecoverPoint and Backup Advisor offer an alternative to Microsoft's System Center data protection management system, which continuously monitors network health but provides a schedule of backups throughout the day rather than continuous data protection.

With EMC's RecoverPoint software, data can be recovered quickly.

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Express Stor is a multifunction appliance that provides a consolidated management point for controlling primary and secondary storage. It acts as a centralized NAS that more efficiently accesses, shares and distributes information across the enterprise and provides high-speed access to large data stores. Users easily find data and share files among various operating systems.



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Continued from Page 16

END NODES

Mobile

■ TRENDnet announced its new TEW-428UF HotFlash 802.11g Wireless and 512MB Flash Memory Combo USB Adapter with HotSpot Detector. The new unit incorporates a Wi-Fi Detector with LCD Display, 802.11g USB 2.0 Adapter, and a 512MB Flash Memory Drive into one convenient solution. The new HotFlash can locate any Wi-Fi signal within a 200-foot range in less than five seconds. It can connect just as quickly with its integrated Wi-Fi 802.11g Adapter. In addition, users can share and store files using the 512MB Flash Memory Drive.

Imaging & Printing

■ Ricoh announced the availability of the Fiery E-8000 color server. This server is based on Fiery System 7 and was designed specifically for the Ricoh Aficio Color 5560 and Aficio 3260C multifunction devices. Features of the E-8000 include the Fiery

Command WorkStation, which has an intuitive interface and a variety of productivity-enhancing tools that make centralized print job management easy. This server also features security enhancements including Secure Erase, a program that removes all traces of data from the hard drive in the E-8000; Port Blocking, a feature that uses remote management principles to control access to the server; and Simple Network Management Protocol v3, which provides a level of security required for large corporations and government and also lets the Fiery E-8000 administrator prevent unauthorized users from accessing this color server.

Server Appliance

■ Cloakware released CSPM (Cloakware Server Password Manager) Express, an appliance that manages server passwords within corporations that have 200 or fewer servers. CSPM Express has the same basic features as CSPM Enterprise. The appliance now adds additional password regulations. For example, it recognizes hard-coded passwords as insecure and does not permit them within any size of company.

This helps companies meet regulations and meet the standards required by an audit.

Storage

- Addonics Technologies unveiled its 5x1 eSATA PM (Port Multiplier), which lets several drives connect to a SATA controller through a single eSATA port. Capable of delivering up to 3GBps throughput, the 5x1 eSATA PM easily fits inside the Addonics Storage Tower. It's also compatible with any standard SCSI enclosure with two or more available bays and a 50-pin Centronic SCSI connector on the back plane. With the 5x1 eSATA PM, users can connect five SATA hard drives individually or in RAID/JBOD configurations. When combined with Addonics' 4-port eSATA controllers, users can manage up to 20 SATA hard drives with a single controller. The port multiplier supports hot-swapping and costs \$89.
- Intradyn's new ComplianceVault06 is a simple appliance that includes everything needed to back up email. 2U models range in storage capacity from 1.8 to 3TB and 3U models range in capacity from 4 to 8TB.

.

Both 2U and 3U models include RAID 5 to provide added protection of data, and they both feature an easy-to-use interface. Intradyn promises a range of search features including wildcard searches, range searches, and fuzzy searches. You can even save your search results for later use and write found files to external media (whether optical or tape). The ability to find and deliver emails via removable media or email is particularly handy in responding to legal or financial audits. A logging feature keeps track of who and when employees access the system and hardware encryption can help protect removable media.

■ Revinetix announced that it supports incremental storage expansion on its disk-based backup and recovery appliances. This new product enhancement, dubbed "aggregation," will enable small and medium-sized businesses to daisy-chain multiple Revinetix disaster recovery devices together and utilize all of the aggregated disk capacity, while managing these units as a single, logical appliance.

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Bluetooth Management For The Masses

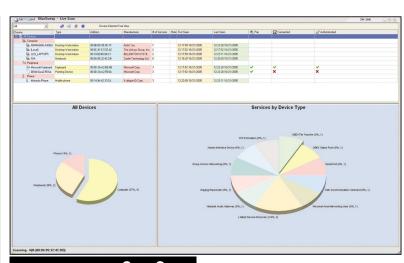
AirMagnet Introduces Freeware Bluetooth Analysis Utility

by Joseph Pasquini

THERE IS NO ESCAPING the ubiquitous nature of wireless networks and the security concerns that accompany them. Yet while everyone understands the importance of securing Wi-Fi environments, managers and analysts often overlook the risks posed by its Bluetooth cousin. In order to help Bluetooth users identify nearby devices and isolate potential security concerns, AirMagnet has released its new BlueSweep freeware utility.

While it can be argued that Bluetooth technology does not play a major role in the corporate arena, there is no denying that the technology is showing up in more phones, PDAs, laptops, and even appliances. Some of this hardware finds its way into a corporate setting. "As Bluetooth devices continue to proliferate, they will become a bigger target for hackers. BlueSweep gives Bluetooth users a way to know if their devices are vulnerable," says Dean Au, AirMagnet's chief executive officer.

Once downloaded and installed, BlueSweep provides users with a comprehensive snapshot of local Bluetooth activity, including information about their own devices. Operating in an "active" mode, the software utilizes the user's own Bluetooth adapter to send out signals and await a response from any nearby devices. The utility's effective range measures up to 30 feet away, depending on the



SNAPSHOT

AirMagnet BlueSweep

Free download from AirMagnet's Web site

Gives users a snapshot of Bluetoothrelated activities and potential security threats

www.Processor.com/AirMagnet

Bluetooth adapter used on the scanning host.

Information provided during the identification process includes the make and manufacturer of any Bluetooth devices visible to the host machine. The utility also gives users the opportunity to see the interconnections between any Bluetooth devices and identify all available services. In addition, the AirMagnet software lets users conduct real-time audits of Bluetooth activity and document potential vulnerabilities and also stores activity history for offline analysis. According to the company, BlueSweep will not block or disrupt other applications. WinXP with SP2, along with a WinXP compatible Bluetooth Adapter (using the native WinXP Bluetooth driver), are required.

In what should prove to be popular by its users, AirMagnet chose to make its BlueSweep analysis tool available as a free download on a "as-is" basis. "Bluetooth is very short range, has had very few reports of actual vulnerabilities exploited, and did not (in our opinion) require a fully paid-up license software model," says Rich Mironov, vice president of marketing for AirMagnet.

Network Chemistry also offers a free vulnerability assessment tool. Known as BlueScanner, the database-driven utility lets users add location information to any discovered devices whereas BlueSweep lets users view interconnections between Bluetooth devices. While AirMagnet does not offer technical support for BlueSweep, it does provide an online FAQ and knowledge base.

Storage Area Network

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Continued from Page 17

SOFTWARE

Messaging & Groupware

■ Advantage International released Add2Outlook For Contacts, which is an Outlook/Exchange plug-in that handles two-way contact replication and four-way edit/delete synchronization. The plug-in supports public, private, and PST folders and public-public, private-public, or private-private folder synchronizations. The plug-in lets users view public contacts over mobile devices. Advantage also released Add2Outlook For Calendars, which synchronizes the Outlook calendar, and Add2Outlook Sync Suite, which includes both modules. Advantage offers 10-day trial versions of its modules on its Web site.

Network & Systems Management

■ National Instruments announced NI TestStand 3.5 test management software. Engineers can use NI TestStand 3.5 to design, prototype, and deploy automated test systems using test code modules developed in legacy and the latest programming environments, including the LabVIEW 8 graphical development environment and NI LabWindows/CVI 8.0 for ANSI C development, as well as Microsoft Visual Studio 6.0 and .NET. NI TestStand 3.5 integrates with the new LabVIEW 8 project library to improve the organization and deployment of files in large automated test systems. With the new deployment utility in NI TestStand 3.5, engineers can deploy all test system software, including driver software, in one distribution package and installer.

. ■ Pervedia released Permission Analyzer 1.2.8, a Windows administration tool that lets you determine whether your system access permissions are properly set, need to be changed, or have been altered by people who are not authorized to make changes. Permission Analyzer gives you an overview of the access rights of each user or user group. With this information, you can effectively manage the computer network access rights within the entire organization. You can initiate scans manually or schedule them to run regularly. Then you can specify the directories to be scanned and limit the number of subdirectories that will be scanned. In addition to reading the reports online, you can export them to HTML and read them with a browser.

Security

■ AirMagnet's Laptop Analyzer 6.0 helps system administrators secure their

wireless networks and helps to ensure data seeping out over a wireless network doesn't violate any federal regulations or standards (such as Sarbanes-Oxley, Health Insurance Portability & Accountability, Gramm-Leach-Bliley, and DOD8100.2). The new 6.0 version also monitors for Payment Card Industry's Data Security Standard. The standard includes 12 regulations that protect customer credit card data when it's broadcast over a company's wireless network. The new version also includes a remote component that lets an onsite employee share captured data with a professional in another city, state, or even country. Laptop Analyzer 6.0 can send security alarms to email or other end-user devices.

■ Securing employee email, especially on mobile devices, is not always an easy task. Authentica's new Secure Mobile Mail for BlackBerry tries to do just that. The software is compatible with Secure Mail For Outlook and Secure Mail For Lotus. Using the software, BlackBerry users can control their mobile email by setting certain permissions on messages. For instance, a BlackBerry user can prevent a certain email message from being copied and pasted. They may wish to prevent another email from being forwarded. Users can even set expiration dates for specific messages. After the specified date, the message and any copies of the message are deleted.

.

■ Cloakware introduced Cloakware Server Password Manager 2.0 for password automation and better security. The new version includes Password Synchronization, which monitors application passwords and automates periodic password changes. Cloakware Server Password Manager 2.0 also includes Administrative Roles, a tool that provides granular control over system administrators' permissions. It supports duty-specific passwords to improve system security. Finally, Version 2.0 adds Client and Server Key Management for changing encryption and decryption keys.

■ Ecutel Systems announced the new EASi (Endpoint Automated Security Initiative) manager, which enables administrators to develop and enforce endpoint security policies. The release also manages device and network access control. EASi features automatic remediation, remote software updates and patch management, and device management and troubleshooting. EASi is available to current and new Viatores NxG Mobile IP VPN customers

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One-Click Mobile Access To Business Intelligence

Intellisync Infobots Give Field Workers Fast Access Through An IM Client

by John Brandon

TIME IS MONEY, and when you're a sales agent, the faster you can access company data, the sooner you get signed contracts. In large corporations there's always a trade-off between mobility and easy access to corporate CRM data. Intellisync Infobots and the Infobots platform help address the issue. Any corporate user can pull up an instant messaging client on a smartphone or PDA and tap in a simple query to access customer information. Intellisync Infobots extend the Intellisync Mobile Suite of products that put vast archives of knowledge in the palm of your hand.

The Infobots platform consists of a server, instant messaging clients for most handheld platforms such as Pocket PC and Palm, and a hosted NOC (network operations center) that gathers the requested data. Intellisync offers Infobot components for modules within the Mobile Suite so users can query flight information, weather, news, and other data. After making a query, the Infobot automatically saves the request for repeated use.

Powerful Infobots for quick CRM queries support most ERP and CRM platforms such as Oracle, Siebel, and Salesforce.com. The advantage for mobile users is usability and speed. With just a few clicks, sales agents can access corporate business data just by tapping a question such as "Xerox customer address." The results are instantaneous. Each Infobot can be selected from a simple menu and comes with onscreen instructions.

With Infobots, there's no need to build an elaborate IT platform that requires a proprietary component installation on the handheld with network plug-ins. Instead, the Infobot client is a simple downloadable Internet utility, similar to

MSN Messenger. Infobot requests and replies are encrypted for extra security protection. The Infobot server runs behind the corporate

SNAPSHOT

Intellisync Infobots

Pricing varies by installation

Lets mobile workers use their mobile devices for one-touch access to nearly any business application

www.Processor.com/Intellisync

firewall, and there's no direct data access because the exchange consists of a request and retrieval. Administrators can use a simple XML Web interface to build new

Infobots that will appear automatically in the IM client.

Access to company data through an Infobot is fed through the Infobot server, but requests for data stored on the Internet, such as a stock quote, is processed through the NOC. In some ways, the Internet lookups are not that different from a simple SMS query through Yahoo! or Google where handheld users can send a text message for quick searches. For example, any corporate user can send a message to 46645 from a Treo 650 and request news, weather, and flight information. However, the CRM lookups are much more valuable, especially for time-crunched sales agents.

Storage Component

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Storage Component

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Continued from Page 18

■ Funk Software released the latest version of its Steel-Belted Radius security management platform, which lets businesses authenticate users, provide access, and develop standards-based endpoint security policies. Version 5.3 introduces customers to a new Centralized Configuration Management feature for replicating configurations from a primary copy of Steel-Belted Radius. The latest version also supports Linux operating environments. In addition, version 5.3 features improved support for SecurID authentication, client certificates, and EAP-POTP and EAP-FAST protocols. Funk Software's Web site offers trial versions of Steel-Belted Radius

Enterprise Edition, Global Enterprise Edition, and Service Provider Edition.

■ McDATA released its security self-assessment tool called SANscope. Users of SANscope receive an individualized report that shows their overall network security standing. This tool also provides detailed security assessments in access control, management, and authentication categories. In addition, the report provides recommendations to help improve the security in the areas that are identified as susceptible to breaches.

■ SafeNet announced the availability of an antivirus utility that lets network

equipment manufacturers add defense against a wide array of virus threats. QuickSec Unified Anti-Virus features Kaspersky Lab's best-of-breed antivirus technology. This is an advanced virus protection solution for corporate email traffic, a main entry point for malicious code. QuickSec Unified Anti-Virus lets network security software use heuristics, behavior emulation, and an antivirus database updated hourly to thoroughly scan for viruses at a network gateway in a real-time format.

■ VIA Technologies recently announced its StrongBox security application is

available as a free download. The security software defends against data and identity theft and provides full language support for English, German, and Simplified Chinese. StrongBox implements VIA's PadLock Security Engine in the company's C7 and C7-M processors to encrypt data in real time with military-grade security algorithms. StrongBox is ideal for enhanced security during PC-to-PC transfers. With the software, users can create up to 10 secure "strongbox" virtual drives on a system's hard drive. The new load and unload feature can transfer VIA StrongBox drives to other storage devices or PCs.

Gain Extra Phone Reliability For Any Circumstance

Muti-Tech MultiVOIP SS Line Keeps You Up & Running

by Ed Tittel

GIVEN THE RISING importance of access to VoIP telephone lines in enterprises, more and more such organizations are seeking ways to maximize uptime and maintain phone service in the event of communications failures between remote or branch offices and central IP telephony equipment. In ordinary operation, many enterprises manage phone calls, voicemail, and other advanced IP telephony services from centralized or headquarters equipment, even for satellite and other remote offices. Should communications between the primary IP telephony server and these operations be interrupted, phone service for satellite and remote locations

might cease working altogether without some kind of fail-safe.

To help maintain phone service despite communications problems between central and remote locations, Multi-Tech Systems offers a family of products called the MultiVOIP SS Survivable SIP Gateway and Server. These units come in two form factors: a small enclosure for a 2-port version (MVP210-SS) and a larger enclosure that houses both 4-port (MVP410-SS) or 8-port (MVP810-SS) versions.

The MultiVOIP SS servers are all intended to keep functioning even when Internet access between a primary IP server or phone system and remote locations is interrupted. These devices are designed to provide local call setup and capabilities that take over for unavailable central IP telephony servers. Local IP phones default to a limited feature set that the MultiVOIP SS delivers, but it can handle station-to-station, station-totrunk, or trunk-to-station calls. The

MultiVOIP SS can also support analog phones and fax machines through its FXS ports, whether communications with the primary central server are up or down.

The MultiVOIP SS family compares quite favorably with other

architectures and also appear to cost less than competitive products. Absolute price determination on other gear, especially Nortel's, is hard to specify exactly because of the costs of other required equipment and server platforms in



MVP410-SS: \$1,599 MVP810-SS: \$2,599

Keeps phone service functioning if communication problems occur between central and remote locations

www.multitech.com

similar products from companies such as Cisco, which offers a Survivable Remote Site Telephony Gateway, and Nortel, which offers a Survivable Remote Gateway product. In general, Multi-Tech's offerings are less tied to specific PBX or IP Telephony server

addition to the outright cost of the survivable remote servers themselves. By contrast, Multi-Tech's offerings work well with standard SS7 compatible phone switches and with all standard VoIP protocols and services.

Optical Wireless Network Connectivity During Disasters

LightPointe Delivers Fast, Temporary Communication Links

by Kurt Marko

MENTION WIRELESS networking, and most people contemplate Wi-Fi-based hotspots or home LANs, while those with keen memories may recall the 3G networks long promised by wireless carriers. However, there's another method for building networks without wires: optical wireless. It is based on technology known as FSO (free-space optics), and it sounds like a network engineer's fantasy—fiber optics without the fiber.

Unlike the more common radio frequency technologies, FSO is line-of-sight (that is, point-to-point)

and thus is typically used for bridging networks, not building a multiclient wireless "cloud." Given the ease of deploying FSO infrastructure, with no trenching or cable pulls required, a key application is in the development of emergency or backup network paths between sites. LightPointe, one of the leaders in the field of FSO-based products, has recently released a Rapid Deployment Kit, an all-in-one solution that provides complete end-to-end optical wireless connectivity.

The LightPointe product allows for the rapid deployment of high-speed (100Mbps or greater) networks and is targeted at disas-

ter recovery and other temporary or emergency applications. The kit includes the key components of an optical wireless network, including a transceiver, power source, and heavy-duty mounting stand for either rooftop or window installations, all in a handy travel case. This combination of optical and wireless technologies offers the performance and security advantages of fiber-optic networks with the simplicity and flexibility of deployment inherent in unlicensed wireless networks. While FSO technology is not without its technical challenges, including the need for an unobstructed line of sight between locations and performance degradation in foggy environments, these can be mitigated with multibeam transceivers and careful planning of site locations.

SNAPSHOT

LightPointe Rapid Deployment Kit

Starts around \$6,000

Provides complete end-to-end optical wireless connectivity in an all-in-one solution

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There are a wide variety of FSO products from companies such as fSONA, Plaintree, Terabeam, and PAV, with performance spanning distances from 500 to 4,000 meters and bandwidths from 10Mbps to 1Gb+. The fSONA SONAbeam

1250 series and the LightPointe FlightStrata/FlightLight G series top the performance charts.

LightPointe is unique in providing a hardware bundle that takes the guesswork out of specifying and procuring a network solution on short order—convenience that could be critical in emergency or time-sensitive situations—while the competition requires that you design and specify each optical component individually.

The Rapid Deployment Kit can be outfitted with one of two optical modules: either the smaller, lighter FlightLite 100E, with a range of 1,500 meters and 100Mbps throughput, or the larger FlightStrata 155, with a range of 3,000 meters and 155Mbps bandwidth.



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_Manufacturer Presentation _

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OPINIONS

Christmas Favorites

Well it's that time of year again—the season of technology industry shutdown. Last year we celebrated this new tradition with the "Twelve Days of Shutdown," and this year I add a couple new pieces: "I'll Be Home For Shutdown" and "'Twas A Night Amidst Shutdown." Hope you like them.

I'll Be Home For Shutdown

I'll be home for Shutdown, There's no place else to go; Stub my toe and spill a cup of joe

So the kids will know it's me. Shutdown Eve will find me Squinting at the Web cam feed:

I'll be home for Shutdown If only virtually.

'Twas A Night Amidst Shutdown

Here is a retelling of an old classic, set mostly in an office environment preparing for the cold week of Shutdown.

'Twas a night amidst Shutdown, and throughout the business Not a creature was working, not even the apprentice.

Best wishes were sent in emails with care.

Telling those with the pagers what days they should wear.

The disk drives were spinning all snug in their bays

With visions of grandeur and hundred-member arrays.

And systems all whirring with nothing to do,

Workstations turned off, and copiers too.

When up from the vents there arose such a clanking

As if something was broken and the power was tanking.

The batteries failed and there went the cache;

The systems crashed hard and my pager did flash. My family was mad but I had

to go Like a samurai techie, a bonafide

When I got into the office I uncorked a beer.

Put on a CD, and kicked into high gear.

Without stupid questions I could work pretty quick,

And I knew in an instant just what was the trick.

The power came first, without a hitch:

The systems in order were brought back from the ditch. Up NAS1, up NAS2 now

Oracle, Linux, On SQL, on Backup, on Outlook and Finance.

Come back from the dead, you belligerent cows,

I'm missing my holiday, so get

moving right now. Like sleepy-headed children the

systems all started Then off to the SANs and robotics I darted.

And there in the back of the racks on a shelf

Was a little green person I thought was an elf.

He was dressed all in spandex from his feet to his neck; I could tell from the look in his

eyes he knew tech.



MARC FARLEY

Marc Farley is the author of "Building Storage" Networks," the leading technology book in the field of storage networking. He is also the president of Building Storage, Inc., a company that provides consulting and educational services to the network storage and financial services industries. Farley regularly writes and speaks about storage networking technology and is an online expert for the SearchStorage Web site.

"What are you, a hacker?" I asked with chagrin;

The little guy just sat there with an irritating grin.

Then I saw a word on his chest-it was "Grinch"

And it took me a second to comprehend this.

"There aren't any toys here to steal," I said,

"You pulled me from home; I should be in bed!"

"Exactly!" he shouted right into my face,

"My job is ruining holidays and this is the place."

And he reached for a cable and gave it a jerk,

Then he laughed when it snapped loose, and this got me quite irked.

I grabbed his little ears and pulled him out of that place;

He started clawing at me and spit flew from his face.

"Get your hands off of me, you big geek and buffoon,"

But I was not letting go-not anytime soon.

We went to the lunchroom, him screaming and kicking, And I gave him a cookie, which

he started licking. He said he had many more vis-

its to make And that screwing up data was

a job he could take. He ranted some more and he started to rave;

Without thinking a second I shoved him into the 'wave.

Without a Grinch setting I pushed "popcorn" by habit; He started rotating and jumped

like a rabbit. I had never cooked Grinch before in my life,

And I knew this was something to keep from my wife.

I went back to the server room and put back the cables.

Checked around for more mischief, and straightened some tables.

When I got back to the lunchroom the Grinch wasn't there; The 'wave door was open and

there was smoke in the air. I dozed off to sleep in the fluo-

rescent light glare Awoke in my bed and knew it was all a nightmare.

I was relieved that there wasn't

a Grinch or his cooking,

And our systems were fine; I did some remote online look-

I turned off the pager and I left it that way, At least until around noon the

next day When I went back to work after

Shutdown had ended, My desk was all messy and my

system suspended. A Grinch voice in a voicemail said, "I finished your beer,"

"I got thirsty in there and a Happy New Year."

P

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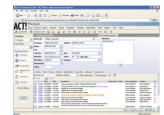


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OPINIONS

Reporting Is Reborn In Visual Studio 2005

I think I'll give the politicians, hackers, and spammers a break this week and focus on a more developer-centric topic. Peter and I are hard at work on "The Hitchhiker's Guide to Visual Studio and SQL Server 2005 (7th Edition)." We've been focusing on reporting lately and the new Visual Studio 2005 Report Viewer control. Since this is a pretty "visual" topic, I wish I could show you a picture, but we're going to have to settle for a vivid word picture.

While creating Reporting Services for SQL Server 2000, the developers at Microsoft created a pretty cool standalone report rendering engine. It does not require Reporting Services to test or preview a prototype report, so you can do everything but deploy the report to the Reporting Services server. I don't expect it took Microsoft that much extra effort to create a new toolbox control to host the reports—that's where the ReportViewer control came from.

Once the .RDLC report is attached to the ReportViewer, you can execute your Visual Basic .NET or C# project, and the ReportViewer renders the report in the host form or Web page. The big difference here is that the data

access query used to fetch the data is done on the client when the report is deployed (not just during testing), not on the Reporting Services server. This means you'll want to build a new Visual Studio Data Source and construct a (new) TableAdapter object to execute the query and handle any input parameters.

These can all be created with wizards and drag-and-drop techniques, so you won't have to write any code. Visual Studio sticks the needed "fill" method invocation into your Form Load event (or ASP page), so all you need to do is fill in the query parameters at runtime. It's really pretty simple.

Wizards & Warlocks

Yes, creating an .RDLC report in Visual Studio 2005 is harder because Microsoft left off the Report Wizard you get with the BI (business intelligence) add-in. This means you're going to have to walk through the process of creating your first report on your own or convert an existing .RDL report. While the BI wizard is cool, we quickly got tired of it and usually found it easier to copy an existing report file (.RDL) and start the new report from there.

Visual Studio 2005 also can't directly import a BI-created .RDL file and convert it to its .RDLC format. However, it's not that hard to transmogrify between the two formats. Microsoft was encouraged (by yours truly) to write a white-

files, keep in mind that the mechanism used by the Report Viewer control, which does all of the heavy lifting, ignores the .RDL <Data Sources> and <Query> elements; it fetches the data using the Data Source, Binding source,



WILLIAM (BILL) VAUGHN

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paper on the subject. (See msdn2 .microsoft.com/en-us/library /ms252109.aspx.) One small caveat though: Only .RDL created with SQL Server 2005 Reporting Services Visual Studio BI add-in can be converted to .RDLC. This should not be a big problem as Visual Studio 2005 BI tools automatically convert from Reporting Services 2000 .RDL format to the new 2005 .RDL format.

Converting From RDL To RDLC

When you're ready to convert these 2005 .RDL report definition

and TableAdapter you define using the Visual Studio 2005 IDE.

Conversion is really pretty simple, and no, you don't have to edit the XML to do so. First, copy the .RDL (2005) report into your Visual Studio 2005 project. Next, rename it with an .RDLC extension. Next, use the Data Sources (Data | Add New Data Source) wizard to create a Visual Studio 2005 Data Source that matches the query used to generate the original .RDL report. Set the ReportViewer control to point to the generated Data Source and TableAdapter instance created by the Data Source wizard. (This step is left out of the MSDN article.) That's it. Click the Run button to test it. Just make sure the columns returned by the Visual Studio 2005 query are the same as those returned by the Reporting Services DataSource. It's easiest to simply use the same query for both data sources.

If you're planning to build SQL Server 2005 Reporting Services reports that include charts and graphs, you'll want to check out a very cool Dundas add-in that's just been released. See www.dun dasreporting.com for all of the details. This new control runs on the Reporting Services server and goes well beyond the capabilities of the Chart control built into Reporting Services. It supports funnel, pyramid, pie, range, Gantt, doughnut (a favorite of law-enforcement), radar, polar, pareto (whatever that is), and histogram charts. The Visual Studio 2005 Report Viewer does not support extensibility, so it can't host this (or any) third-party controls. This means if you use the new Dundas Chart control or any new third-party controls on your Reporting Services 2005 reports, they can't be converted to run from Visual Studio using the Report Viewer control.

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OPINIONS

TECHSPERTISE

Assessing The Value & Costs Of Municipal Wireless Networks

The benefits of municipal wireless networks are almost unlimited. Nationwide, counties are leveraging their newfound mobility to increase employee productivity, enhance public safety, and improve citizen services.

In Spotsylvania, Va., police officers connect to a secure municipal wireless network from their cruisers to view real-time images from Internet-based cameras installed inside schools. In an emergency responders benefit from advance situational awareness—before they enter the schools. Officers also use the same network in the field to complete incident reports, research criminal data, and coordinate response efforts.

The Kane County, Ill., Coroner's Office leverages a wireless network as well. Staff working in the field hand-write their notes about ongoing investigations on Tablet PCs and wirelessly transmit the information to the office, streamlining the data-entry process and ensuring information privacy through secure access management.

Despite the numerous benefits, the costs, time, and uncertainty associated with this emerging technology sometimes make municipal wireless networks less attractive than wired alternatives. To evaluate the value of a wireless network, municipalities should consider the following.

1. Purpose. Local governments must first determine how the wireless network will be used. The type of traffic the network will carry will often dictate the network requirements and technology approach. Mainstream technology approaches include:

Internet connection points deployed throughout a building or local community. If placed outdoors, these routers are commonly attached to a government-owned building or sign within a weather-protected, secure case. Wi-Fi access points provide effective wireless connectivity within about 100 meters of the access device. 802.11 devices support a bandwidth between

KENNETH GRIMSLEY

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Cellular (CDMA/GSM): A municipal cellular wireless network is based on current cell phone towers. Similar to phones or PDAs, laptops can transfer data at up to 14Kbps over cellular networks.

Wi-Fi (802.11a/b/g): Wi-Fi networks, built on 802.11 standards, require routers with dedicated

54Mbps and operate on 2.4 or 5GHz frequencies.

WiMax (802.16): A WiMax municipal area network, based on 802.16 standards, provides high-throughput broadband connections over long distances. A WiMax network can provide access in a linear service area of

up to 30 miles and a data rate of up to 70Mbps. A WiMax network supports a higher quality of service for a denser population of mobile users while cutting costs by converging all connections into a single Internet connection.

Mesh (Partial/Full): A mesh network is based on multiple standards and employs one of two connection arrangements: full mesh or partial mesh. In the full mesh network, each computing device is connected directly to each of the others, supporting the LAN with multiple connectivity tunnels. In the partial mesh network, some devices are connected to all the others, while other devices are linked only to the devices with which they exchange the most data. A mesh network is ideal in the event of a disaster, as it offers several redundancies to decrease downtime in the event that some connection points fail.

- 2. Cost. Estimates vary because each municipality's needs are different. Local governments must consider the total coverage area and the type of network that will meet their communications needs and then weigh budget constraints against up-front costs and long-term service agreements. A wireless network covering a half-mile radius could surpass \$100,000.
- **3. Security requirements.** Security and access rights can affect network costs depending on how freely the wireless Internet service

will be provided. For free public Internet use, access management costs can be relatively minimal. On the other hand, first responder networks require increased access management and network security to keep mission-critical and confidential data secure, increasing expenditures in this area.

4. Vendor support. Most municipalities do not have all of the necessary manpower and expertise to implement a new wireless network, so it is important to identify a vendor-neutral partner, such as a consultant or technology reseller, who will work closely with local IT staff throughout the design, implementation, and initial operation of the network to resolve any problems quickly and accurately.

5. Proof of concept. Municipalities should require a pilot project before the entire network is implemented. This test run lets the vendor prove the network will provide a demonstrable return on investment and work as planned. If the vendor balks at a pilot project, look elsewhere for assistance.

Taking a methodical approach to wireless network adoption by assessing network purpose, cost, security, support, and implementation, will ensure local governments make the right technology decisions that fulfill their mission requirements.

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Cost Considerations For Outsourcing vs. In-House

Breaking Down The Specifics Of Common Tasks SMEs Outsource

by Will Kelly

SMALL TO midsized enterprise data center services can be a balancing act of what to handle with your in-house staff and what services your SME can outsource to a thirdparty provider. Outsourcing vs. keeping technology infrastructure tasks in-house is a balancing act of costs and staffing. The budget for maintaining infrastructure inhouse must factor in staff salaries, security, and maintenance services such as operating system and software patching. Under an outsourcing arrangement, you are paying for services managed by staff with costs spread out across a hosting provider's

customer base, contributing to cost savings for customers.

Beyond the economics of outsourcing the common tasks in this article, it's important that you analyze the management and control you would give up by outsourcing key technology infrastructure to third parties.

Web Hosting

Web hosting is perhaps the most outsourced technology service in the SME market sector. As complex Web applications and interactivity balanced with sufficient online security become the norm, outsourcing your corporate Web hosting to a third-party provider could be an option.

Hosting a Web site with in-house resources requires skilled staff to manage the connectivity and security of your server. There is also an investment in hardware, software, and operating system for the site. Both popular Web server operating systems have their costs. SMEs standardized on Microsoft Windows launching a Windowsbased Web server must brace themselves for server licensing, which means that every installed copy of the server software requires the purchase of a Windows server license. Additionally, a Windows CAL (Windows Server 2003 Client Access License) is required to access or use the server software. However, a Windows CAL is not a requirement for unauthenticated access over the Internet.

Even Linux/Apache-based Web servers have their costs, especially in maintaining technical expertise in-house. According to the Gartner Group, internal limitations, such as skill sets and availability of related external vendor support, continue to hinder expansion of Linux servers in SMEs.

Outsourcing your corporate Web site hosting requires a gut check for your comfort level for enabling a third party to have so much control over a visible corporate asset. When a third party is hosting your Web site, you are making a financial investment entering, maintaining, and exiting the business arrangement. With the high-profile nature of a corporate Web site, it's best to have your attorney review the SLA from the vendor prior to entering the outsourcing agreement.

Email Server

Managing Microsoft Exchange Server 2003 in-house requires a financial investment in server and client licensing. Depending on any existing licensing agreements with Microsoft, financial costs for the server and client licensing may vary. There is no getting around the staff attention required for hosting a Microsoft Exchange Server in-house with the necessity of having to stay on top of service packs and patches to secure the email server.

Hosting Microsoft Exchange Server inhouse does remain a popular option for many SMEs, as found in a May 2004 joint Yankee Group/Sunbelt Software survey of 500 SMEs, indicating support is gaining for the Microsoft bundled server package. Over 86% of SME survey respondents were planning to deploy or already using Windows Small Business Server 2000 or Windows Small Business Server 2003.

Outsourcing email hosting is due in part to the complexity of Microsoft Exchange Server 2003, according to the Radicati Group. Recent virus outbreaks also play into the desire to outsource email. These drastic counterpoints about email server management speak of the need for having the requisite expertise in-house to manage Microsoft Exchange.

Managed Security

While network security is a critical task, affording in-house security expertise is often out of reach to most SMEs because of market demand and the ever-changing nature of today's network security threats.

Outsourcing network security tasks to a Managed Security Provider enables you to tap into security expertise you could never afford to keep in-house. While keeping certified and skilled security staff on the payroll can be cost prohibitive, an MSP has the revenue from multiple clients to support security specialist salaries.

The Yankee Group decision note "How SMBs Can Take Advantage of MSP's Offerings" reports, "An MSP far exceeds the response time that an IT staff with limited expertise or an offsite VAR can provide." The same report also points to the potential cons in an SME/security provider relationship, including a strong service level agreement, responsiveness, and availability.

Customer Relationship Management Software

Customer Relationship Management software is a tacit business requirement in sales-driven organizations. However, CRM vendors are just turning their sights on the SME market. According to the Aberdeen Group, "The biggest market dynamic in the CRM SMB market is the entry of several large business application providers, notably Microsoft Business Solutions, Siebel Systems, SAP, and PeopleSoft."

A professional services engagement is typical of most CRM implementations because of the customization CRM products require. Such engagements are a significant upfront financial investment that often place traditional CRM applications out of financial reach of many SMEs.

In-house CRM applications often serve limited audiences (sales, marketing, and accounts receivable) but require a specially trained administrator to manage the system. Such training and administration add to inhouse costs.

Outsourcing vs. In-House

Cost often drives the outsourcing of key technology applications and services, but your analysis shouldn't stop there. Factoring in employee salaries, employee workloads, and the core expertise of your IT department also needs to come into play when making the decision to outsource or keep the application/system under the management of your in-house staff.

Typical Costs Of In-House vs. Outsourcing

Here's a breakdown of the different costs for outsourcing or in-house options.

Task	Outsource	In-House
Web Hosting	There are multiple options for outsourcing your Web server hosting: • Colocating a Web server: \$150 per megabit per second for one to four servers (Level 3) • Dedicated Web server: \$79 per month (1 & 1 Internet) • Shared Web hosting: \$9.99 per month (1 & 1 Internet)	Apache Web server: Free Linux OS: Free Server hardware: \$1,500+ System administrator salary: \$65,000+
Email Server	Hosting Microsoft Exchange Server 2003 via a third-party host: \$12.95 for the first email account, \$9.95 for each addi- tional email account (Mail Street Exchange Hosting)	Microsoft Exchange Server 2003: \$6,499.99 for 25-user license Server hardware: \$2,000+ System administrator salary: \$65,000+
Managed Security	Network security monitoring: \$75,000+ excluding hardware and staffing (cert.org study)	Network security monitoring within an organization produces similar hardware costs, plus at least \$240,000 in annual compensation to hire three full-time specialists (cert.org study)
CRM	SalesForce.com: starts at \$65 per user per month with its Team Edition CRM costing \$995 for five users for one year. (SalesForce.com)	Microsoft CRM: 1.2 starts at \$449 per user (standard edition), Microsoft CRM Sales Modules \$1,049 per server (Amazon.com) Windows Small Business Server 2003 Premium Edition: \$789 (Amazon.com) Server hardware: \$2,000+ Server administrator salary: \$65,000+

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A New Face In The **Executive Suite**

Chief Compliance Officers In Hot Demand For Industries Bound By Regulatory Compliance

by Sandra Kay Miller

IN THE WAKE OF corporate scandals such as Enron, WorldCom, and Tyco, many corporations are adding a new chair at the executives' table for a chief compliance officer. Thanks to recent federal legislation, executives risk legal action for failure to comply with legislation such as Sarbanes-Oxley, which dictates how corporations need to report their financial statements.

Although the CCO position is already common in highly regulated sectors, including healthcare, insurance, financial services, and government agencies, the U.S. Federal Sentencing Guidelines are recommending CCOs for all corporations subject to regulatory compliance.

Finding The Right Candidate

It is a frequent misconception that compliance is strictly related to IT. Despite the many technology-related challenges in regards to compliance, Michael Rasmussen, vice president of Forrester Research, points out that the role and responsibility of an IT manager overseeing compliance from a technical standpoint is much different from overseeing the entire compliance picture. "You've got human resources, workforce, public safety, environmental—a ton of regulations that operate well outside of IT," says Rasmussen.

It helps for CCOs to have a firm understanding of IT and how it relates to compliance, but CCOs frequently come out of the corporate legal department because the bulk of responsibility is adherence to state and federal laws. Smaller corporations often choose to add compliance responsibilities to the role of their general counsel.

Being a relatively new position, corporations lack a concrete description of the position they intend to fill. Given the severity of consequences, organizations are taking great care in their CCO choice, targeting those with in-depth knowledge of their specific industry as well as the regulatory and compliance issues that pertain to it.

Due to the demand for CCOs, corporations often make the mistake of hiring a compliance officer from outside their industry. Stephen Mader with executive recruiting firm Christian & Timbers points out that the role of a chief compliance officer does not easily cross industry lines. "There aren't enough people around with the credentials, so there's a lot of stretching. There's a belief somebody can learn the job if they have some compliance background," says Mader.

The shortage of qualified CCO candidates also means that candidates will not come cheap. Nicole Cox, director of legal and compliance recruitment for Robert Hadley Associates, warns that salaries begin around \$500,000, and with a law or master's degree and some experience, can easily top \$1 million.

Besides the right skills set, being that this is an executive position, the CCO candidate must also possess outstanding integrity, business judgment, and leadership, as well as the ability to work closely with the board of directors, other executives, management, employees, and external auditors.

Chain Of Command

To effectively perform his or her duties, the CCO should report directly to the board. According to the Federal Sentencing Guidelines, the board is ultimately responsible for determining the success of its organization's regulatory compliance program, which makes board members subject to prosecution for compliance violations.

The CCO should also cultivate a close working relationship with other CXO-level executives, especially the chief information officer, who can greatly aid in compliance reporting methodologies by taking advantage of the organization's existing infrastructure.

With the cooperation of the CIO, the CCO can leverage a corporate-wide reporting system offering a global picture of the organization's compliance program that includes compliance-related information for reports, archives, and auditing. The CIO is also critical in the adherence to regulations pertaining to protocols for information in regards to electronic communications privacy, confidentiality, and security.

Hiring and retaining CCO positions will become easier as front-runners train their next-in-commands who will eventually transition into a full-time compliance career path. Expect to see more experienced CCO applicants in the coming years.

CCO Job Description

Here are some of the responsibilities a chief compliance officer might have.

- Create, manage, and enforce a corporate compliance program
- · Conduct periodic reviews and updates to ensure compliance
- Interface with other departments, such as Internal Auditing, Legal, HR, and IT, to set up channels for investigation and resolution of compliance-related issues
- · Address alleged violations of compliance program
- Provide independent review and evaluation of existing compliance processes
- · Monitor corporate-wide compliance groups
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- · Respond to requests from regulatory bodies
- · Report potential violations and actual violations to appropriate enforcement agencies

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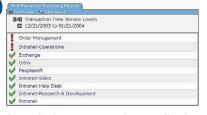
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ging, and testers find the log invaluable for testing and benchmarking computer hardware and software. For trial copy go to www.Processor.com/Isuru



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Setting Up A Project Management Office

Do Your Homework To Find Out What It Entails

by Jason Stahl and Curt Harler

SETTING UP a project management office to handle IT needs can seem like an intimidating task for small to midsized enterprises, especially considering that this new office, in some cases, will be solely responsible for making sure that all of the company's processes run smoothly and efficiently.

Consultant vs. Permanent Technician

Eric LeCain, head of technology administration for the New York consulting firm Clark & Weinstock, says that such an undertaking doesn't have to be complicated. In fact, he says there are two directions an SME can take when first starting to head down the road toward IT project management: hiring a consulting firm or hiring one or more permanent IT technicians.

The consulting firm will send a team of people to a company to accomplish the desired task. Those people will leave once the task is accomplished, and the firm will establish a help line for employees to access via email or phone if they have a problem. The other option is for an SME to hire one or more full-time IT technicians who work on various projects and continue to maintain those projects onsite. Of the two options, LeCain favors hiring a consulting firm.

"If you hire somebody permanent and that person doesn't work out, it's harder to get rid of him," LeCain says. "If you hire a consulting company, you don't have to worry about firing somebody and getting sued. Since consulting companies only loan you technicians temporarily, all you have to do is call them and tell them this certain individual isn't working out and have them send someone else."

LeCain admits, however, that hiring a consulting firm can be risky, as well. The bottom line is how much research a company does before making the decision. "If you get a good consulting company that takes care of its clients, you can have a positive experience," he says. "On the other hand, you might get lucky with the technology consultant you hire outright and find someone who knows how to hire people and manage a whole department."

LeCain says the more details you get about the consulting company in the beginning, the better off you are. Those details include finding out what the cost will be and what services that cost will include.

Follow Guidelines

Shelly Boyd, project management office manager for Blackwell Consulting Group, says it helps to follow a few guidelines in setting up a project management office regardless of whether it is for IT or other projects. "A PMO needs authority from the top-level executives," Boyd says. "That way, if people don't abide by the processes the PMO is establishing, there is some accountability."

Boyd says there also has to be an understanding of why a PMO is being created. A charter must be developed and a purpose defined, at which point it can be determined what actual activities the PMO will undertake

As far as staffing, Boyd says that the requirements of a PMO depend on the organization. Some will rely on a PMO director and other PMO staff members who do not work on particular assignments but rather support the PMO director. In that scenario, the PMO director will be managing processes and not resources.

Another structure might consist of a PMO director, a PMO manager, and PMO staff members who each have their own responsibility for managing one particular area (training, auditing, etc.). While that is a typical configuration at many large companies, for most SMEs the sheer size of the PMO staff might be prohibitive.

The Importance Of Procedures

Whether an SME decides to go with a director who calls in resources from other departments, a consultant, or a full-blown PMO staff, LeCain says one key to success, especially in the beginning of a project, is setting up procedures and saving them. "For instance, what to do when a new person comes in or what to do when someone is fired. Who owns the information on a com-

puter and how long can someone who was fired keep their email address?" LeCain says.

A system to back up data consistently and reliably is also essential. A company may need to go back two years to find information relevant to aid it in a lawsuit. It needs a procedure for finding such information.

"Companies will look at the cost of hardware and that becomes their biggest focus," says LeCain. "But they really have to pay attention to the day after the hardware shows up and how much that will cost. There are always going to be problems with operating systems. And software is only as good as the person who knows how to use it. So training is a big part of the picture. If you let it slide, you offset the cost of the machines."

Boyd says lack of buy-in from top level executives could destroy a firm's attempt to create a PMO. She warns, "If you don't have buy-in and support of the executive staff, and therefore no authority, who's going to listen and follow the PMO initiatives?"

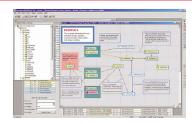
Project Management Duties

Typical project management tasks include the

- · Updating systems (Internet connections,
- Updating hardware and software
- · Advising on hiring IS/IT help
- · Rewriting software
- · Connecting new offices
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- · Integrating phone system into email
- Dealing with viruses and spam
- · Performing data backup

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WHAT'S HAPPENING

NetSensory: Taking Intelligent Guessing Out Of The Equation

Managing The Network For Application Delivery

by Chris A. MacKinnon

WHEN THINGS SLOW DOWN on the network, everyone wants to point the finger. An application is to blame, or perhaps it's a network card or switch causing the problem. In any case, IT departments have been pining for a more comprehensive solution to application and network performance degradation. Bob Quillin, vice president of product management at Network Physics, says that his company has the technology to solve the great application performance predicament. He says, "What was missing until recently was a vendor-neutral method for determining performance issues and matching the best-fitting optimization solutions."

All About Performance

There is no doubt in any IT manager's mind that network infrastructure is increasing in scope and complexity as new applications and new delivery methods are introduced. Quillin says this greater complexity makes identifying application performance problems a bigger challenge because there are more variables to consider. He says networking manufacturers have responded by bringing to market a plethora of WAN optimization and application acceleration tools. On the same token, traditional network design, operations, and network management have focused on speeds and feeds, pushing as much data through the network as possible.

Unfortunately, Quillin notes, application performance has not improved with bandwidth. He says, "In many cases application performance has gone down as bandwidth has gone up. Most applications were never designed for the WAN, instead assuming LAN access. Chattiness, latency, and server load are issues now at the forefront of network application management. We're seeing a shift toward truly managing the network for application delivery first and foremost."

Quillin says some of the present network application management industry hurdles can be handled with a Network Physics innovative technology called Insights. "Insights are XML-based templates that quickly and easily walk users through the steps necessary to ensure that applications are running at their peak performance. These steps cover audit, baseline, troubleshoot, secure, and optimize. Using NetSensory with Insights, enterprises now more easily pinpoint the source of the problem and match the appropriate solution to optimize performance. Once a solution is implemented, users have a way to measure the effectiveness of the solution by gaining a clear picture of before and after." The company recently introduced NetSensory OS 5.0 with Insights.

Insights Secrets

Quillin says the enigma behind Net-Sensory Insights rests on several key capa-

bilities. "The first is a built-in workflow model that allows Insights developers to represent the steps required to solve a problem, all within the context of a single screen. The second capability is that In-

sights are XML templates that can be downloaded from an Insight portal, allowing for the steady flow of new Insights to the end users. In today's fast-paced, competitive environment, enterprises cannot afford to fall behind. The third capability comes from an Insight Development community that is building around the recently announced Insight Builder."

So why should small to medium-sized enterprises participate in network application management as Network Physics sees it? Quillin's answer: "IT departments make every effort to choose the best tools for managing and monitoring the performance of their networks and applications. Yet there are still gaps in their visibility—

blind spots that don't let them see end-user application performance problems. So when end users complain, the blame game begins. Is a computer virus or worm slowing everything down? Is there a rogue employee sending large volumes of confidential information outside the firewall? Without a technology like NetSensory, network managers are left to make intelligent guesses, wasting valuable time and resources."

In a nutshell, Network Physics' Net-Sensory Enterprise Architecture enables enterprise-wide visibility across a globally distributed network application infrastructure. A NetSensory OS controls an NP-Director appliance, which coordinates a NetSensory Domain of up to 20 NP-2000 appliances. The NP-Director appliance also provides aggregate reporting, analysis, and transparent navigation across the entire environment. The company's NetSensory solution operates across any combination of

ther: to take a known application response time bottleneck and specifically relate it to the router interface and WAN link.

Much is happening in this space, but the most rapid progress, Quillin says, is happening in the adjacent markets of application acceleration and WAN optimization. He notes that new acceleration companies and innovative technologies are hitting the market at a record pace. In many cases, he says, customers are bypassing measurement and instrumentation altogether and instead jumping blindly at optimization and acceleration products to solve their performance issues.

But Network Physics is proposing a more structured approach. Quillin says, "First, understand where the performance issues truly are (server, WAN, Internet, application, security) by baselining the network. With an accurate reading of where the issues are, IT teams are then in a position to compare alternative acceleration solutions side-by-side

to measure which one gives the best results quantitatively for their network. As the network changes, they will need to understand where new bottlenecks emerge. Today's networks and applications now resemble natural

now resemble natural systems and behave and grow in unpredictable, organic ways."

Quillin says viewing IT operations as an ecosystem that extends through the network, systems, and application team will let network application management provide the definitive way to bridge gaps across IT silos and end the finger-pointing and in-fighting. "By managing application flows, IT eliminates the guesswork on whom or what is to blame and allows IT to focus its energies on fixing problems and moving on. Linking that insight with the newest breed of application acceleration and optimization products will take IT out of a decade of reactive management and lead it into the next wave of proactive, application-oriented networks."



Network Physics

Internet, WAN, VPN, MPLS (multiprotocol label switching), and LAN.

Acceleration Prevails

Quillin says that IT staff will experience serious performance improvements using Network Physics' technology. He says, "Our customers have already found a five to 10X reduction in the time it takes to accurately pinpoint a problem: from hours and days down to minutes. With the introduction of NetSensory Insights, that value can now be spread throughout an IT organization: out to the helpdesk, over to the application team, and up to the IT executive." By combining the Insights with NetFlow data, Quillin says users can take troubleshooting one step fur-

TWO TERMS

ASP (Application Service Provider) What it is: ASPs are third-party pro-

viders of software services to companies that may not have the in-house expertise or budget to host their own applications. So in that sense, an ASP is another company to which you can outsource a service or software application.

Why you should care: Using an ASP can provide your business with a great deal of focused expertise at a better price than it would cost to provide the service or implement the application in-house. But you must consider that using an ASP means ceding control of a function previously performed internally to a third party. Even though ASPs have traditionally been used for functions such as Web site or server hosting, increasingly "business focused" functions (such as HR) are now being outsourced to ASPs.

Related products and manufacturers: ASPNews.com features an extensive directory of ASPs. (The ASP Directory link is along the left side of the home page.) The directory subdivides ASP companies into the following categories: infrastructure, network, solution, and software providers. Thousands of ASPs are featured in this directory.

ASP (Active Server Pages)

What it is: A Microsoft technology that enables developers to create interactive, database-driven Web sites using either VB Script or Jscript as the programming languages for generating dynamically created Web pages. For example, ASP programming makes it possible for a Web developer to create an application that delivers dynamic Web content dependent on user input into a Web-based form. ASP is Microsoft's answer to Common Gateway Interface, one of the first technologies to deliver dynamic Web content.

Why you should care: ASP-driven Web sites are a step removed from static, HTML-only Web sites whose content never changes. With ASP, you can develop Web sites that feature truly interactive, database-driven content. For example, you can use ASP to create a Web site that collects input from users and, based on that input, generates dynamically created Web pages for the user. This greatly enhances the interactivity and functionality of a Web site.

Related products and manufacturers: Microsoft's FrontPage is the client program that can be used to develop ASP Web site content. For ASP to work, the server hosting the Web site must have a Microsoft OS or Microsoft Web server functionality.

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You'll also find:

- Disaster recovery advice for VoIP systems
- What manufacturers are doing to make wireless more secure
- Whether network monitoring tools are worth the expense
- Products and tools for monitoring workstation activity

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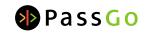
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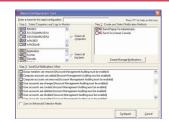
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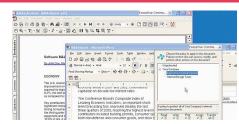
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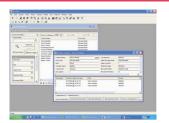
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Manufacturer Presentation.

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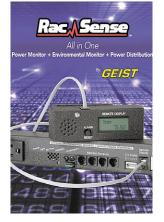
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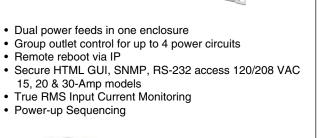
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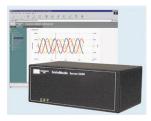
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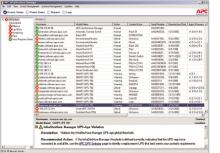
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CSPM Express (Appliance) - designed for organizations with less than 200 servers CSPM (Software) - designed for organizations with more than 200 servers

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Reflex Security Adds Multi-Gig Solution to Network IPS Suite



Reflex Security, Inc., a leader in network intrusion prevention solutions, has developed a new multi-gigabit intrusion prevention solution, the Reflex IPS MG™. The Reflex IPS MG identifies, analyzes and responds to internal and external security threats in real-time through comprehensive threat detection and prevention techniques. Operating inline at speeds of up to 5 gigabits per second, the Reflex IPS MG eliminates the tradeoff between effective security and scalable performance.

The Reflex IPS MG delivers improved security, increased reliability and performance to prevent today's most serious network security threats. The Reflex IPS MG vastly outperforms traditional solutions. It leverages a wire-speed, multi-gigabit packet-handling architecture, which utilizes application specific integrated circuit (ASIC) network interface modules that balance loads across multiple CPUs.

"In the past, protection of high-speed enterprise network segments meant compromising security for performance," said Hezi Moore, Reflex Security Founder and CTO. "As a result, organizations deploying network intrusion prevention systems are no longer forced to choose between offline, IDS-converted systems or purely ASIC-based solutions that promise speed but are limited in adaptability and slow to respond to new security threats."



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Sound familiar? Network monitoring used to be so simple. If there was a problem in the network, all one needed to do was to plug a sniffer into a data port of a hub. A sniffer (or protocol analyzer) is something that every network engineer needs. However it is similar to having a fire extinguisher, the perfect tool for an emergency, yet spending most of its life offline, just standing by. Whenever an emergency arises, it would be hand carried to the trouble spot. And when the problem is resolved, it would be returned to the closet to await the next fire.

Today, monitoring is much more than protocol analysis. Security is a big reason for "out-of-band" monitoring. Not only does the network need to keep the bad guys from attacking from the outside, but also to keep important and confidential information from leaking from the inside. Unlike a sniffer, however, these security tools (e.g., IDS or Intrusion Detection Systems) require reliable and 24/7 access to the production traffic.

With Sarbanes-Oxley requirements (or similarly with HIPPA), compliance monitoring becomes as important as security. Monitoring tools such as forensic data recorders or database transaction auditors are as mission critical as IDS. Clearly there are incentives for performing proactive monitoring because while failure to protect against intrusion means loss of revenue, failure to comply could mean jail time for the CEO.

At the same time, performance monitoring has evolved, it is now about application and not just protocol. Application Performance Monitoring, either to monitor performance of enterprise software applications (CRM, etc.) or to monitor performance and quality of VoIP calls within an enterprise (or to provide ability for Legal Intercept as demanded by government agencies) has become a fast growing business.

Together these are the 3 P's driving the needs for networking monitoring (P for Performance, P for Protection and P for Proactive).

On the other hand, networks are no longer flat. Hubs have all but gone away and are replaced by Layer 2/3 switches. Traffic is no longer replicated in every data port. Instead, they traverse in point-to-point paths. This change in architecture has dramatically improved the throughput and the bandwidth utilization. However, it has taken away network visibility. We can no longer just plug

a tool into a hub and expect to see every packet. Instead we now rely on SPAN port (or mirroring port) which would replicate incoming or outgoing traffic on a particular port or packets belonging to a particular VLAN on a switch. And there are a limited number of SPAN ports available (typically one, two at most).

So competition for SPAN ports in a typical enterprise environment is not only real, it is counterproductive. And it is becoming difficult for us to do their job, for the IT team who is interested in Performance, the security team who is responsible for Protection, or the compliance team who has been asked to be Proactive.

And the problem has become worse as mission critical networks become redundant, tiered and fully meshed. Not only are there too many tools, there are now too many links. In other words, we must now monitor traffic that doesn't even follow a single deterministic

To do our job, we must aggregate packets from multiple sources such that we can reconstruct an "end-toend" view in the case where there are asymmetric routes, load-balanced or fault tolerant redundant links, or a "big pipe" view where we have deployed trunk links to increase throughput between two switches.

Gigamon is the first out of the gate with a real answer to these problems. Their flagship product, GigaVUE-MP, is a distributed Data-Access Switch to allow multiple "out-of-band" monitoring tools to share multiple SPAN ports across multiple switches, saving lots of money while providing comprehensive coverage for redundant networks.

With GigaVUE, our sniffers, IDS, application performance monitors, SOX or HIPPA auditors, VoIP analyzers and forensic data recorders can each gain customized and unobtrusive 24/7 access through the limited number of SPAN ports or taps.

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_Manufacturer Presentation

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OptimANA™ CP3600



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Manufacturer Presentation

Simple Way To Manage Identity & Protect Information

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- I-Manager— This Web-based application lets you quickly configure Identity, enable users and create policies incrementally for easy, manageable deployment. I-Manager also generates clear, customizable reports of all interactions.
- I-Gateway—This hardened, inline appliance sits between users and critical assets, enforcing policies at wire speed based on the unique user identities in the packets. The Identity Operating System (IDOS) also resides on I-Gateway, providing a secure and extensible software platform for TNT and third-party identity-based applications.



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Manufacturer Presentation

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Manufacturer Presentation

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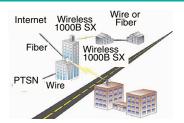
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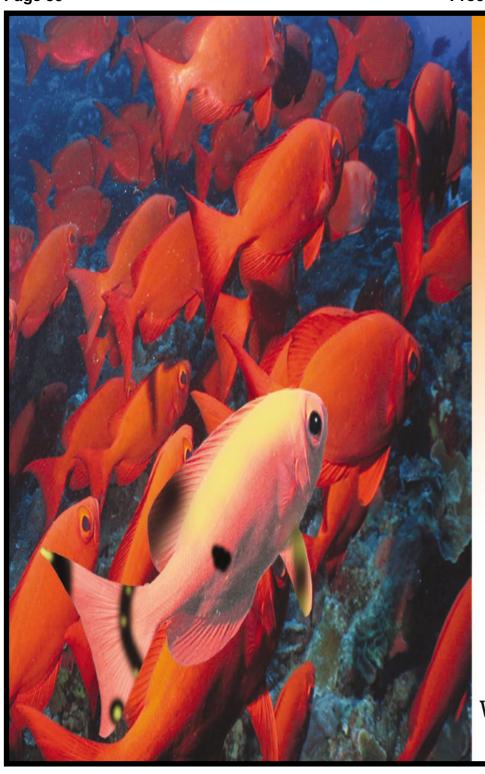
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